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U. S. DEPARTMENT OF LABOR  
JAMES J. DAVIS, Secretary  
BUREAU OF LABOR STATISTICS  
ETHELBERT STEWART, Commissioner

# MONTHLY LABOR REVIEW

Vol. 29, No. 1



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## SPECIAL FEATURES IN THIS ISSUE

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THE BUREAU OF LABOR STATISTICS**

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**Productivity of labor in newspaper printing. Bulletin No. 475.**

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**Proceedings of 15th annual meeting of governmental officials in industry. Bulletin No. 480.**

**Wages and hours of labor of common street laborers, 1928. Bulletin No. 484.**

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**Deaths from lead poisoning, 1925-1927. Bulletin No. 488.**



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# **MONTHLY LABOR REVIEW**

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### **This Issue in Brief**

*Approximately 80,000 old people can be cared for in homes for the aged* maintained by fraternal, religious, trade-union, and other organizations and groups, according to a recent survey made by the Bureau of Labor Statistics covering 1,037 homes of this character. Page 1.

*California became the tenth State to provide a pension system for aged residents of the State* by the action of Governor Young in signing, on May 28, 1929, what is probably the best law on this subject enacted in the United States. The law provides a pension up to \$1 a day to citizens over 70 years of age who for 15 years have been residents of the State and citizens of the United States. The system is to be administered by the county, or city and county, and supervised by the State, one-half of the cost to be borne by the State. Page 24.

*An occupational disease is defined as "an affliction which is the result of exposure to an industrial health hazard"* in an article (p. 29) dealing with the cause, prevalence, and prevention of occupational diseases. While specific occupational diseases are fairly common, and in certain industries a specific disease like lead poisoning may have a high incidence, it should be noted, also, that these diseases are very apt to be the beginning of other afflictions and to pass into chronic, partly occupational diseases.

*New industrial hazards are constantly appearing* in connection with the development of new industrial processes. One of the latest of such hazards is that arising from the use of "dry ice," which has recently come into rather extensive commercial use, being used by ice-cream plants and dairy-products companies for packing their products and for other industrial purposes where a low temperature is desired. The ice has an estimated temperature of 110° below zero and is capable of producing a serious injury if it is carelessly handled. Page 96.

*Industrial disputes in the United States in 1928 continued at a low level*, the number of disputes occurring in that year—629—being the smallest number recorded during any year since the beginning of the bureau's compilations in 1916, and the number of employees concerned in disputes being only 357,145. Page 132.

*Significantly fewer accidents occur in plants having safety organizations*, according to a study made by the Illinois Department of Labor to determine the effectiveness of plant safety organizations in reducing accidents in industrial establishments. The annual accident rate per 1,000 employees in establishments having safety organizations was 58 as compared with a rate of 72 where there were no safety organizations. Page 101.

*A marked increase in the labor productivity of seamen* in 1926 compared with 1916 is shown by the recent report of the United States Bureau of the Census on water transportation. The average gross tonnage of vessels per employee increased from 69.3 in 1916 to 89.8 in 1926 (an increase of 29.6 per cent) and the average freight tonnage handled per employee increased from 1,445 in 1916 to 2,192 in 1926 (an increase of 51.7 per cent). Page 82.

*Continued progress in the community recreation movement* is shown by a report of the recreation activities in 1928. Recreation programs and facilities under leadership were reported by 872 cities—an increase of 57 over the number reporting in the previous year. A total of 1,113 recreation areas or other facilities was opened during the year for the first time, and a larger proportion of paid workers was reported than ever before. The daily attendance at outdoor playgrounds for those cities reporting averaged more than 1,000,000, while the participants for the season at bathing beaches and outdoor swimming pools numbered more than 34,000,000. Page 89.

*A study of migrant child workers* employed in the fruit and vegetable fields and canneries of Maryland shows that one serious aspect of their employment is that it involves leaving school some time before it closes in the spring, and frequently does not permit return until some weeks after it opens in the fall, thus causing a serious disorganization of the child's school work and standing. Moreover, since the workers usually go as a family group, the younger children presumably are as seriously affected as those actually employed. Page 86.

*The membership of workers' organizations in 62 countries* was over 46,000,000 on January 1, 1928, according to a report of the International Federation of Trade Unions, an increase of approximately 28 per cent since January 1, 1925. Of the countries for which figures were given for both dates, the percentage increase in membership was highest in China. Page 123.

*Combined sales of nearly \$3,300,000 for 1928*, as compared with \$2,873,964 in 1927, are reported by the two leading cooperative wholesale societies of the United States. Their combined profits in 1928 amounted to about \$62,000. Page 115.

# MONTHLY LABOR REVIEW

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## Administration and Conditions of Old People's Homes

### Summary

**T**HE Bureau of Labor Statistics has just completed a statistical study of homes for the aged in the United States.<sup>1</sup> Data were obtained for 1,037 homes sheltering nearly 69,000 persons and involving the expenditure of more than \$26,000,000 per year. These homes had an average capacity of 63 persons per home. In total the Bureau of Labor Statistics was able to locate some 1,270 homes of all types, but no claim is made as to the absolute completeness of this figure. On the basis of this figure, however, and applying to it the average capacity of the homes for which data were obtained, it is estimated that, altogether, homes for the aged in this country have facilities for some 80,000 persons.

Most of the data for the bureau's statistical study had to be gathered by mail, and the returns gave no indication of what the homes themselves were actually like. In order, therefore, to gain some idea of the physical conditions in a representative group of homes, it was decided that an agent should visit every home that could be found in a specified area. The homes in the States of Maryland and Connecticut and the eastern half of Pennsylvania were covered in this way. In addition four homes in New York and one each in New Jersey, Colorado, Illinois, and Tennessee were visited, so that altogether some 150 homes were studied. The present article is based upon the observations at the homes visited.

The homes visited included the following:

	Number
Federal homes.....	1
State homes.....	2
Religious homes.....	74
Fraternal homes.....	13
Homes of nationality groups.....	2
Trade-union homes.....	3
Private homes.....	52
Other homes.....	4
Total.....	151

The overwhelming majority of these homes were in or just outside some city or town. With a few exceptions, the homes were found to be well located and housed in good buildings. Generally the rooms

<sup>1</sup> Preliminary data on certain groups of these homes have been given in previous issues of the Labor Review, as follows: Fraternal and religious groups, March, 1929, pp. 3-30; and nationality and private groups, April, 1929, pp. 1-26.



were well arranged, especially in cases where the building had been built for the purpose of an old people's home.

Although the yard space available varied in size from one small city lot to grounds of more than 2,000 acres in extent, almost invariably an attempt had been made to beautify the grounds with lawns, flowers, and shrubs. Some homes were outstanding by reason of the beauty of the grounds.

The average home visited provided at least one well-furnished general sitting room for the use of the residents, and sun parlors were very frequently found.

Individual bedrooms were found to be the general rule, though a few institutions require two or more residents to share a room, and some homes operate on the dormitory system. The bedrooms varied greatly in attractiveness, from dark, poorly furnished rooms to those which were light, cheerful, and well furnished. In general the sleeping accommodations were good.

Where opportunity offered to judge the menus and the food served, the latter appeared to be good in quality, though plain and perhaps lacking something in variety.

The homes are usually run by a board of directors which has full powers, exercised, in most cases, through committees. Actual management is in the hands of the matron, and she holds the most important position in the home, from the point of view of the inmates. It was found that, as a group, the matrons were of a type above the average, being in a number of cases women of superior ability. The exceptions were so infrequent as to be noticeable for that very reason. Study of the homes leads to the conclusion that while the existence of a good live house committee of the board of directors is very important, to a very much greater degree the success of the home and the happiness of the residents depend upon the personality and ability of the matron. The physical and mental well-being of the residents is in her hands. It was therefore interesting to find that in the great majority of the homes visited the matron had succeeded in making the scene of her endeavors a real home.

#### Location of Homes

OF THE HOMES visited, all but 11 were in or just outside some city or town. These 11 were situated in the country, some distance from any settlement, and in one or two cases so secluded that they could be reached only by automobile, there being no regular means of transportation. In several instances these country homes had beautiful locations. One was in the center of an exquisite little valley, which at the time of the agent's visit, was lovely with blossoming orchards. Another stood on the ridge of a chain of mountains, from which there was a splendid view of the surrounding country. But such homes, while peaceful and healthful, have the disadvantage of being too remote to permit of easy access by the friends of the inmates. This is a great disadvantage in the eyes of many old people. There were, in fact, several instances in which a home, located in a neighborhood which had run down since the establishment of the home there, was planning on removal to the outskirts of the city where a better and more spacious site could be secured. In nearly every instance the move was vigorously opposed by a majority of

the old folks in the home, on the ground that while the present location was poor, at least it was convenient and easy for their friends to drop in for a visit.

Of the homes visited which were in towns or cities, about 70 per cent were in a good neighborhood or location (and in some 30 cases the location was excellent). In about 25 cases the neighborhood had been good but had run down considerably; in 13 cases it could be definitely classed as poor and in 4 cases as very poor and altogether unsuitable. In one home of the last-named class the home was an old house in the wholesale district of the city, in another case the district in which the home was had become the manufacturing district, and in a third instance the neighborhood was known to be the rendezvous for the roughest and most lawless classes in the community. The fourth home stands on the edge of a precipitous hill at the foot of which are railroad tracks and a factory which emits black smoke all day, so that the air is filled with it.

In other cases the neighborhood was neither bad nor good, but simply dingy and unattractive.

In the great majority of cases the homes visited showed evidence of a desire to secure the best possible location for the home. Many of them were in the best residential sections, on wide shady streets, often overlooking a park or lake and in several instances a river. In some instances the location was superb. One such home, for instance, is located on a broad plateau in the bend of a beautiful river, and the porches of the home afford a wonderful view of the river for miles, with the mountains rising on either side. Back of the home rises a mountain the springs of which supply the home with pure, ice-cold water. To the right of the building is a lovely little lake and a waterfall. The home grounds are at the southern edge of a village of several thousand people. In another city there is a group of homes all overlooking a beautiful park; one of these homes faces the park in front, while its rear grounds adjoin the rolling land of a country club. Another is situated in a leafy suburb and the home faces a wide river where the university boat races are held, affording the old people a source of interest. Still another is built on the top of a hill overlooking a small town; its grounds are beautiful with flowering shrubs and enormous pine trees, and its porches afford a beautiful view over the rolling countryside for miles around; this home and grounds were peace itself. A number of other homes are so situated as to command a view of the mountains.

### Home Buildings

THE BUILDINGS in which the old people are housed are of all sorts, ranging from dingy, run-down buildings which are hopeless from the point of view of sanitation and renovation to new fireproof buildings shining with cleanliness and equipped with all modern conveniences.

Many of the smaller homes are occupying ordinary dwelling houses, some in good repair, some not. Some have begun with a small house, and as the home family has grown in numbers have either added a wing here and there to the original building or have moved to a larger building. A number of homes now occupying old buildings are planning to remove to a new home in a better location.



In one home, whose family is drawn from a steadily decreasing group, the guests now occupy only one of a number of the buildings formerly used. The building they are in is very old and no amount of labor will make it appear clean. The furnishings are also old and shabby. The few remaining guests occupy scantily furnished north rooms opening out to the south upon a fairly wide bare hall. At the time of the agent's visit the majority of residents were drawn up around the windows in the hall, in the sunshine, preferring this to the dingy sitting room downstairs. This home has an unusually high per capita cost of operation, but most of this goes for the upkeep and repair of the buildings on the home grounds and not for the comfort of the inmates. For the same maintenance cost the residents could be given all the comforts in a small modern house.

In one or two instances the arrangement of rooms could be improved upon. Thus one home, which has a dormitory for the men, has, opening off this room at the corners, four rooms for married couples. The only means of ingress and egress is through the dormitory. In another, the upstairs porches can be reached only through the toilet rooms. In a third the pressing and sewing room for the residents (or "handy room") opens off the reception room which is at the right of the front entrance. In another the infirmary is located on the first floor between the general living room and the dining room.

These, however, were the exceptions. Generally the arrangement of rooms is very good.

In two of the States whose homes for the aged were visited the State requirements as to safety and sanitation must be complied with, and inspectors visit the homes to see that this is done. As a general rule the new buildings are of fireproof construction, but some of the old buildings are not, and a number of homes were visited which had had to construct a special fireproof tower with staircase opening onto each floor of the home to provide a means of escape in case of fire.

One home was in a bad state of disrepair. The paint had gone long since, and the porches were sagging and rotten. An unkempt yard and rusty iron fence, only part of whose gate was left, added to the generally disreputable aspect of the place.

On the whole the home buildings are good. Only five visited could be called poor, a number were only fair, but a large number were very good indeed.

Brick and stone were the materials most generally used in the larger institutions. The smaller buildings were mostly of frame construction.

#### Home Grounds

WELL-TRIMMED LAWNS and some attempt to beautify the grounds are the almost universal rule among the homes visited. As a number of homes were in the city where land is expensive, some of these had only the lot on which the home stood. Almost invariably, however, this was beautified by lawns, hedges or other shrubs, or perhaps a bed of flowers. Many had flowering trees which were in blossom at the time of the agent's visit.

In one or two instances no attempt was made even to tidy up the yard, in one case there was no yard at all, and in one case the yard had been cemented over.



One home which had no front yard but had a very small space in back, had this in a velvety lawn, around the edges (against an iron fence) being planted perennials which blossom at different times during the summer, and in the center a small bed of flaming red cannas. A small rear porch had been supplied with splint rockers which the matron herself had painted orange and black; these had cushions to match, while an orange and black awning provided an additional note of color. The result was a very attractive spot, though small.

The majority of homes have managed to secure a good-sized plot of ground and to beautify this with shrubs, flowers, and winding walks or drives.

In some cases where landscaping has been done, broad, low terraces, often with flagging or red tile, add to the beauty of the place.

One home which has very little ground has made its small yard a beautiful place, by judicious use of shrubs and flowers, utilizing even the rocks, with which the ground had been thick, in a lovely rock garden. Another (rural) home has terraced its broad front lawn down to a stream which flows through the property, making use of iris and other flowers in a broad strip at the side of the grounds.

A city home is set back from the street behind a fence whose base and supports are of the same tapestry brick used in the construction of the house, but which is open in its effect because of the iron grating used between the pillars. About 12 feet back of this fence, at the top of a bank, is a brick wall some 2 feet high beyond which on either side of the central walk is a garden with flowers and box. A porch whose tiled floor is flush with the ground extends across the front of the building between the jutting wings. Climbing roses are planted in front of each of the pillars to the porch.

Another home is set in 80 acres of lawn, groves, and landscaped gardens. In several other cases the grounds are of park size, with winding roads and beautiful gardens.

### Furnishings of Homes

#### Entrance Halls

THE ENTRANCE HALLS of some of the homes, especially in the newer buildings, are most attractive. Part of the beauty was usually supplied by the stairway. In many homes the main stairway is directly opposite the front door, dividing at the top of a short flight and continuing on either side. In one home with such a stairway the railings and stairs were of cream color and the carpet in the center of the stairs a deep rich red. A small home with a narrow winding staircase had this finished in pure white, the runner being of black and gray.

In another home the stairway ran up along the back wall which had windows set in at the level of the stairs all the way up. These windows were gay with flowering plants.

Two homes visited had a central rotunda reaching to the roof, with a gallery on each floor.

#### General Living Rooms

Exceptional indeed was the home which has no general gathering room for the inmates, or for the reception of visitors, and many of the homes have parlors and sitting rooms beautifully and tastefully

furnished. It is true that in some instances these did not appear to be used to any great extent by the guests. Others, however, were quite evidently the center of the life of the home.

Some of the larger homes have one or more sitting rooms on each floor. It is a fairly common arrangement to have a sitting room or sun room at the end of each corridor. Where the building is wider than it is deep, the room directly above the entrance, on the second floor, is almost invariably a sitting room or library. Deep blue and ivory form a favorite color scheme here. One very attractive new home has a large general sitting room which runs across the whole side of the building. This room has many windows, some of which look out upon the boulevard upon which the home is situated and some upon a rock garden at the side. There is a big open fireplace in the center of the room and easy chairs are everywhere. The rugs and upholstery of this room are of deep blue while the woodwork and window hangings are the color of ivory. The room has a victrola with many records, and a radio. Out of this room opens a smaller one, with the same color scheme, which is used as a music room. Both rooms were sweet with fresh flowers. Several old ladies were reading in the sitting room at the time of the agent's visit.

One large institution conducted on a lavish scale has several luxuriously furnished gathering rooms in the main building. In each of the other buildings there is a sitting room on each floor; these are much used. Other favorite assembly places in this home are the glassed-in corridors which connect these buildings with the main building. These corridors are furnished with rustic furniture and are steam heated in winter. The windows slide back so as to provide a cool place in the summer.

Still another home furnished in the most luxurious manner has a general living room or "lounge" which is magnificent. It is two stories high with an arched, beamed ceiling. The walls are paneled part way up in walnut. The furniture—easy chairs and davenports—is upholstered in brown leather. In this room are many books, a piano and a radio. At one end are French windows leading out upon a terrace.

The use made of the general living rooms varies from home to home. In some places the sitting rooms are the center of the life of the home. Here the old people gather in the evening and at odd moments during the day for a friendly chat or to read. In some homes the matron reads aloud in the evening from the daily newspaper or a book. This is especially appreciated, as many of the guests are afflicted with poor eyesight and can not see to read in the evening. In one home for ladies this is a general practice all through the winter. The ladies bring their knitting or tatting and one of their number or the matron reads aloud. In another it is a common practice to sing together in the evenings after the paper has been read.

In several cases the living room is provided with a row of chairs and each inmate has her own special chair.

In other cases it was quite evident that the parlors were intended for the use of visitors to the home rather than for the guests themselves. In one instance the inmates say that they have to die to get into the parlor, as that room is the one in which the funeral services are held.

Sometimes, however, where the guests are free to use the living rooms they do not do so, preferring to stay in their own rooms.



Indeed one matron said she had a hard time getting them into the home's very attractive parlors even when an entertainment was being given. In certain cases the living rooms are so dreary and unpleasant that it is no wonder they remain unused. In one home the superintendent threw open the door of a bleak, stuffy room and said: "This is the sitting room, but nobody sits here except one old lady who comes in for a few minutes every day." In this case a sunny sewing room on the other side of the building was used more as a sitting room than the sitting room itself, because it was more inviting in appearance. In another home an attractive upstairs sitting room with books, magazines, and radio is neglected in favor of a large, rather formal room downstairs, for no reason that the matron could see except that the latter faces the street and the old ladies can see the people passing by.

In several homes the so-called living room was a room furnished with a row of splint rockers extending around the walls, and a table in the center of the room. There were no pictures, no rugs, and no attempt to beautify the place or make it livable. Another group of homes which provide only the barest necessities of life have no sitting rooms; the only concession in this respect is a row of dilapidated chairs around the walls of the dining room.

In many instances the living rooms are shabby but very comfortable and bear the marks of continuous usage.

#### Sleeping Rooms

The individual accommodations for sleeping purposes vary from home to home. In some cases the dormitory system is used, the number of beds in a dormitory varying from 3 or 4 to as many as 25 or 30. One boarding home, which has some private rooms, also has a dormitory which by the use of white curtains on poles is partitioned off into cubicles large enough to hold bed, dresser, and chair. In the majority of homes visited, however, each individual has his own private bedroom, though in a few cases there were two persons sharing a room. One home provides each of its 28 woman residents with a suite of two rooms (bedroom and sitting room). In this case the building was originally planned for individual housekeeping, with each resident cooking her own meals and caring for herself, as in the "widows' homes." This plan was later changed, however, and the home is now run like the usual home, with a common table.

Generally married couples are assigned to a double room, but one home visited provides each couple with separate but communicating rooms.

Some homes place two persons in a room so that they can look after each other. One matron remarked, however, that she couldn't see how such an arrangement could be successful; if she tried it her folks "would tear each other's hair."

Some few of the homes which provide private bedrooms for the women provide dormitories for some or all of the men. The men, it is said, do not mind sharing a room with others, but the women like a room by themselves. The matron in one home which provides most of its inmates with private rooms but also has a dormitory with five or six beds says that often when a private room has become available she has offered to remove one of the men from the dormitory but has



almost invariably been met with the reply that they prefer the dormitory, as they like the company of the others.

Management of the home is generally easier where each person has his own room, as clashes of temperament over the arrangements within the room are thereby avoided. This is a factor worth consideration, since each old person usually has his or her own notions of things and may defend these valiantly, to the detriment of the general peace.

Where each person has a private bedroom there is provided drawer and closet space for clothes<sup>2</sup> and personal belongings and the room may be decorated with pictures and the little knickknacks which appeal to the occupant. This latter feature is especially appreciated by the women. In fact some of them go to such extremes in this respect that their rooms are literally crammed with odds and ends. The men's rooms usually remain rather bare and unadorned. There were, however, two exceptions to this last statement: The two sailors' homes visited (admitting only men) showed a degree of ability in imparting the "lived-in look" that was not found in any of the other exclusively men's homes.

The tendency of some of the women to strew their rooms with photographs, doilies, and ornaments of various kinds, and the tendency of the men to keep the furnishings of their rooms reduced to a minimum has led several matrons to a settled conviction that the men are "neater" than the women.

The problem of the disposal of personal belongings becomes acute when the dormitory system is used. Generally there is space between the beds only for a commode and a chair, or a small table or chest and a chair. One or two homes provide lockers in or near the sleeping room, each individual being assigned one of these. In one organization which runs many old people's homes throughout the country, all of which are practically uniform in general layout and practices, each person is provided with a small dark blue bag in which are kept brush, comb, and other small articles. This hangs at the head of the bed, out of sight. Here also is a small towel rack on which the towel is kept. Each home has four dormitories: One each for the able-bodied men and the able-bodied women, and one each for the infirm men and the infirm women. Each dormitory has a large wardrobe in which the everyday clothes are hung, all together. The Sunday clothes were in another wardrobe all rolled up into bundles and tied.

There is no attempt at decorations in the dormitories; there are no rugs and no pictures, just beds and a few chairs, and in one case not even chairs. In one or two of the homes visited the old people (except those who are bedridden or ill, and these are usually in a room by themselves) are forbidden to lie down on the beds during the day, in fact the dormitory doors are kept locked. Inquiry as to what provision there was, in case an afternoon nap was desired or in case an inmate did not feel well and wished to lie down, elicited the information that in such cases they must either doze in their chairs or use one of the few couches provided in the general sitting room if fortunate enough to find one of these vacant.

<sup>2</sup> Though one home was found which provides private rooms which have no clothes closets. There is a large central space on each floor where each resident has a locker. The matron said she preferred this arrangement to closets, as where there was a closet the inmates "would throw anything into it."

In the homes with the private bedrooms, on the other hand, an inmate may stay in her room all day if she desires and may lie down when she pleases. Indeed, some homes have what they call a "quiet hour" after the midday meal, during which absolute quiet is expected to prevail, so that those who wish to take naps may do so undisturbed.

The private rooms are generally furnished at least with metal bed, dresser, one or two chairs, and table. This is the minimum supply. Other articles of furniture may be added, if the size of the room and the funds of the home permit. In general, the rooms in the older homes are larger than those in the new. New homes, designed especially for the purpose which they are to serve, usually have medium-sized or small bedrooms all of a size and almost invariably furnished with the same articles of furniture in every room. In some cases the occupant may add some of her own furniture, a rug or two, etc.; this practice is more general in the older homes than in the newer ones. In the latter, especially where the home is supported by an organization, the rooms are usually furnished by different units of the organization and in such cases the objection is often made that furniture brought in by the guest would be out of harmony with the general scheme.

Some homes encourage the inmates to supply all of the furniture for their own rooms, if they can, on the ground that they are happier among their own things.

The furnishings of the bedrooms vary from home to home, from the shabby to the luxurious. One home in the latter class furnishes its bedrooms in three general color schemes for carpet, bedspread, window hangings, and upholstery—tan, old rose, and Delft blue—the guest being given his choice of these. Each bedroom contains a 4-poster bed, a big arm chair and a smaller wing chair upholstered in tapestry, a desk chair, a writing desk, and a chiffonier. Each room also has an open fireplace with a clock of good make on the mantel, a wall bookcase, and a wall telephone. At the head of each bed is a cord with a push button to summon an orderly if attention is needed during the night. The room is provided with a floor lamp, a cluster of lights in the center of the ceiling, and wall lights at either side of the chiffonier. The carpets are deep and soft. The closets have a built-in chest of drawers at one end above which is a tier of shelves. In a small room opening off each bedroom is a private toilet, bowl with running water, and medicine cabinet.

This, however, is an unusual home, and while many homes each provide some of the features mentioned, in no other instance visited were all found in any one place. Only six others of the homes visited had running water in all the rooms, and one other had it in a few of the rooms. One of these had private toilets as well as washbowls in the new wing of the building and two others in a few of the rooms. One home, in addition to the one described at length above, had an electric push button in every room, while two others have a watchman who makes the rounds of the rooms every hour during the night to make sure everything is all right.

Some of the rooms are delightful places. One home visited, for instance, was occupying a former dwelling house which had been renovated throughout. This was a small home, accommodating only 19 old ladies, and the bedrooms varied considerably in size. All



had been freshly papered with dainty and attractive bedroom paper and all the furniture was new. Each room was decorated in a different color, with dainty ruffled curtains at the windows and a gay (generally a rag) rug on the floor, and each had some individual touch that set it apart from all the others.

In one very delightful home for women, perhaps a majority of the residents have substituted a couch for the usual bed, making their rooms more like sitting rooms than bedrooms. This was the only instance of its kind discovered.

Metal furniture is much in use for the bedrooms in the newer homes, on grounds of sanitation. One such home furnishes each bedroom with bed, straight chair, rocker, dresser, table, and night table, all of metal so treated as to look like wood. The chairs of some rooms are upholstered in tapestry, others in flowered cretonne. Each room has two good rugs.

In many instances the bedrooms are not remarkable in any respect, but are comfortable, cheerful, and light. In the older homes, especially, the woman residents have their windows full of flowering plants in which they take a good deal of pride and which add to the attractiveness of the room. One home has a general conservatory for the home and another where the individual residents may keep their plants.

Window curtains and rugs are two articles which do much toward making a room attractive, and lack of these in many cases made an otherwise pleasant room seem somewhat bare and cheerless.

It was noticeable that the newly constructed buildings usually have no wallpaper in any of the rooms, but have the plaster tinted various colors. In one home the bedroom walls were tinted a faint green, another home had chosen for this purpose a cold, peculiar blue, but cream color was the favorite hue.

It is a general practice, when a room is vacated for any reason, to seize this opportunity for cleaning and redecorating before admitting a new occupant.

#### Dining Rooms

There appears to be a general tendency away from the long rectangular tables, formerly used in institutions, toward small (usually round) tables seating from four to eight persons each. Although many homes still have the long tables, the great majority of those visited are using the small tables. The result is a much more home-like and less institutional appearance. Many have the Windsor style of chairs. One home, in which most of the guests are old and clumsy and find it hard to draw their chairs up to the table, has instead of chairs revolving stools fastened to the floor.

Use of linen tablecloths is most general, but there were found quite a number, invariably in the less modern and comfortable homes, in which the long tables were covered with oilcloth (white, brown, or a mixture of colors) which was the exact size of the tables and was fastened to them. Several used an oilcloth, with a raised pattern resembling a damask pattern, which was laid upon the table and hung over the edge like a linen cloth. One or two homes used tables with white porcelain tops.

In a group of homes operated by one organization each resident has at his or her place at the table a small drawer in which knife,



fork and spoon, napkin ring, cup and saucer, salt and pepper shakers, etc., are kept between meals.

One or two of the homes furnish for the men, instead of napkins, a sort of bib with a strip which slips over the head, and these hang on the chairs between meals.

The dining room is a very pleasant room in most homes. In a large number of the homes the dining room was in a wing running out from the rest of the house and extending across the whole width of the wing so that it had windows on both sides. Many rooms were brightened by the presence of flowers, fresh or artificial, upon the tables.

In one endowed home with an especially attractive dining room, the tables were set for the noon meal, with good linen, shining silver and cut glass, and a low bowl of flowers in the center of each table. This room has a bay window which occupies the whole of one side of the room. Plain silk curtains hung at the windows.

Another home run on a lavish scale has a dining hall two stories in height, with an immense open fireplace, walls paneled nearly half way up, and Gothic beamed ceiling. There are large stained glass windows at either end, and all along one side above and in the paneling. The round tables seat 8 each; 230 persons are served here three times a day.

*Matron's dining room.*—In the majority of cases the matron eats in the same room and sometimes at the same table as the residents. In a few cases, however, a private dining room is provided for her. In one home visited, in which the inmates were served on tables covered with oilcloth, the matron's table, in a private room, was laid with good linen and silver.

#### Libraries

Generally some attempt is made to provide reading matter for the inmates. The home usually takes one or more newspapers and magazines and in many cases the residents themselves subscribe to a magazine, church paper, etc., turning these over to the home after reading. A bookcase or two filled with books is found in nearly all homes, and some homes have a great many. One home with wide halls had in the hall on each floor several tables piled high with books. In another every available nook and corner all over the building had its shelves of books.

Some homes have a library room lined with books. In one such, the library is a large room on the second floor, directly over the entrance. The room has paneled walls, built-in bookcases, and many easy chairs. A large table is covered with magazines. Large, high windows, low, cushioned window seats, and an open fireplace add to the attractiveness of the room. The prevailing color is brown.

In another home the library is on the ground floor overlooking the garden, and that side of the room rounds out and is all windows, with a French window in the center leading out upon a terrace. The woodwork of the room is ivory, and the carpet is sapphire blue, as is also the upholstery of the easy chairs. The room is lined with books. This home is occupied by well-educated and cultured people who make a good deal of use of the library.

One of the largest institutions has a library with nearly 12,000 volumes. One of the residents acts as librarian. Another home has a

library to which the guests come a good deal to get books, but as the room is on the north side, crowded, and rather cheerless, they do not stay there to read but take the books to their rooms. (This home has a formal parlor, but no general sitting room.)

Another home has a reading room (the reading matter consisting mainly of newspapers) for the men only. The women are evidently not supposed to read.

The matron of another home exhibited "the library," a very small room about 5 by 10 feet, the only books in sight being a pile in one corner which looked as though they might have been bound periodicals.

The largest institution visited has in it a branch of the public library of a near-by city. The books are changed every three months. There is also a periodical room where all the morning and evening papers issued roundabout are received, and the wide corridors extending from wing to wing are lined with reading desks for the use of the men.

Another home with a library has an active library committee which is constantly obtaining new books for the home. Two homes which have several blind inmates provide books in Braille for these, besides reading matter for the seeing guests.

Generally the library is open to the guests at all times and they are free to take the books as they like. In one home, however, books are given out three times a week. Another home has a committee which issues books once a month. The day of the agent's visit was "library day" and the old people were filing in to return their books and get new ones. Some had 8 or 10 books each.

The value of a library to a home is of course dependent upon the culture, class, and habits of the inmates. In some homes, reading is one of the main diversions of the residents and they would be lost without books. The library of one home visited had a number of people reading there, although it was not yet 10 o'clock in the morning. On the other hand the director of a large home for men which has a library of thousands of volumes says that probably not more than 5 per cent of the men make any use of the library.

Where the residents have never acquired the habit of reading, the absence of books, of course, is not felt. Home after home was visited in which there was in evidence no reading matter of any kind. It was noteworthy that these usually were also homes which provided nothing in the way of diversion or recreation. The sitting room in such homes was usually found fairly well filled with old people who were doing nothing at all, not even talking, just looking blankly straight ahead.

#### Sun Rooms and Porches

Hardly a home but has at least one porch, and those of the newer group have several. One very large building had 17 porches.

Sun rooms and inclosed porches are being featured a good deal. It is true that some of the places so called were sun rooms by courtesy merely. In one home the matron had to turn on the electricity to exhibit this room; it was beautifully furnished, but could hardly be called accurately a sun room. The majority of those visited, however, have an attractive sun room; some of these are charmingly furnished. One home has six such porches, one of which has a radio, while those guests who desire quiet have the other porches for their use.



## Kitchen Equipment

The home kitchens visited were, almost without exception, light, airy, commodious, and usually well arranged. Installation of labor-saving devices is most general where the home funds permit of this. Automatic refrigeration, dishwashing machines, potato parers, bread cutters, meat grinders—some or all of these are very commonly found among the kitchen equipment of homes for the aged. One large home has a machine that spreads and bakes 100 pancakes a minute. Several are equipped with steam-jacketed pots for cooking.

A few, especially the large homes in which it is a problem to keep the food hot while it is being served, have steam tables for this purpose.

## Other Features or Conveniences

*Elevators.*—Elevators, especially the automatic kind, are becoming a common feature of old people's homes. Nearly every home has at least one or two inmates who are unable to walk up and down the stairs. The matron of a home which recently installed an elevator said that four inmates who hadn't been able to come down to the dining room for years were thus enabled to come to their meals. Elevators are expensive to install, but are a convenience and also serve to eliminate labor otherwise necessary—as for instance the service of meals in the rooms in the case just cited.<sup>4</sup> Also, they enable the residents to move more freely about the home. Inmates confined to wheel chairs can be wheeled into the elevator and moved from floor to floor. The elevator also permits a better use of ground space in cities where the cost of land is an important item. The general desire in homes for old people is for a building not more than three stories in height, two being preferable. Several of the new homes, however, situated where land is very costly, have erected buildings four to seven stories in height. In all cases elevator service is provided, one home having three elevators, with regular attendants.

*Floor coverings.*—Quite generally the general living rooms, reception rooms, and parlors are well carpeted. The main exceptions to this were one or two homes for colored people whose carpets were very old and even worn through in places. At the other end of the scale were several homes whose parlor floors were covered with oriental rugs of great beauty.

Hall floor coverings were in perhaps a majority of cases linoleum cemented down. In one case this was so slippery as to present a considerable hazard, especially to old people uncertain on their feet. One home had its hall floors covered with rubber several inches thick.

*Other conveniences.*—Several of the homes visited had placed hand-rails along the walls of the halls, for the convenience of the old people who were shaky and infirm.

Another home had placed most attractive Dutch benches in odd spots throughout the building, upon which the guests could drop down and rest.

A number of homes allow the residents the use of the laundry at specified hours or on certain days. Others provide a special "handy room" which has a gas plate, a stationary tub, ironing board, electric

<sup>4</sup> That this may be quite a factor may be seen by the fact that in one home 38 persons are served in their rooms. Another home has seven persons who are unable to come to meals because of there being no elevator.



iron, etc. Here they may come to wash out small articles, do their pressing, or make themselves a cup of tea.

Some homes either allow the residents to bring their own sewing machines or provide a room equipped with one or more of these which the guests may use.

One institution visited has on each floor a portable porcelain bathtub which can be wheeled from room to room when a guest is ill or infirm and unable to go to the bathroom to bathe. In another the bathtubs are in the center of the room to facilitate assistance by the orderly in the case of those who are unable to manage by themselves.

Two homes maintain a motor car for the use of the residents.

Another has no stairs. There is an inclined runway (with handrail at each side) leading from floor to floor which is used not only by the able-bodied residents but over which disabled guests can be moved in their wheel chairs.

The homes which have men among their residents almost invariably provide a smoking room (often in the basement), sometimes providing card tables or billiard tables as well. The men are usually forbidden to smoke in their rooms.

Several of the men's homes have a barber shop to which a barber comes periodically or in which one or more full-time workers are employed. One large home employs five barbers. In other homes there is a barber's chair and the men shave each other.

In one or two homes there is a room with a telephone which the guests are at liberty to use when they please.

A number of the newer homes have drinking water piped to all the halls.

Several homes which are a number of stories high have roof gardens.

### Infirmary or Hospital

ALL BUT the smallest homes—and even some of these—have a room or two set aside in which guests may be cared for in serious illnesses. Minor ailments are usually treated in the patient's own room.

The equipment in this "infirmary" room may be merely a white iron bed and a chair or two. A number of the homes have beds adjustable at the head and in some cases at the foot also. A diet kitchen may be provided somewhere near. Sometimes an adjoining room and bath is provided for the use of a nurse. In a few cases visited, the infirmary, the nurse's room, and a bathroom are in a wing by themselves so as to insure quiet and prevent possible spread of contagion to the rest of the house.

One new home has one floor devoted to infirmary purposes. Here are a diet kitchen, a room for minor operations, and a drug closet. At the north end of the corridor are the acute cases in private rooms fitted with hospital beds and tables, and a small dining room for convalescents who are almost well enough to go back to their regular bedrooms. At one end of this section is a beautifully furnished sun parlor for the use of the convalescents. Patients afflicted with chronic illnesses occupy ordinary bedrooms at the south end of this floor.

Many of the homes visited had no patients in the infirmary at the time of the visit, but in one home a whole building was required for use as an infirmary.

In another institution where the infirmary occupies one wing, the individual rooms are separated by partitions of glass. Another has a doctor's office, rooms for general and special examinations, a diet kitchen, and a room where an orderly is on duty. This last-mentioned room is connected by electric buttons with all the residents' rooms; if anyone needs attention during the night he presses the button which causes a light to flash on the board in the orderly's room.

Most of these rooms are light, clean, pleasant places. One home was visited, however, in which the infirmary, so called, consisted of a large, dark, and dingy room with five ordinary beds, four of which were occupied by bedridden residents. The matron appeared to resent the care that these inmates caused, although the actual work of caring for them was done by a resident nurse.

In several cases the home for the aged forms one department of a large general hospital, and when the members of the home family need hospital care they get it at the hospital.

Others have a hospital exclusively for the residents of the home.

One home solves the problem of the care of chronic cases by having in the same grounds an endowed "home for incurables" to which the old people are sent when they become hopelessly disabled. Acute cases are treated in the general (public) hospital operated by the same organization. Three other large institutions remove their chronic cases from the dormitory buildings to the hospital operated for the purpose. One of these hospitals has 100 beds, the second 110 beds, and the third 400 beds. All three of these accept persons who are disabled at the time of their admission into the home; they feel that it is this class of people which most needs the benefit of the home's care.

### Administration and Management of Homes

THE SO-CALLED "private" homes may be divided into two classes: Those established under the terms of a will and supported by the funds made available thereunder, and those whose support is derived from contributions from the citizens of the community.

In the latter case the home is usually started by a group of citizens who, acting as incorporators, provide for the formation of a "home association" to which any adult person of the community is eligible, upon payment of prescribed membership dues. This association meets once a year, at which time a board of "directors" or "managers" is chosen. The full board of directors holds regular meetings at quarterly or monthly intervals and special meetings at such other times as may be necessary. The board has the usual officers who may be chosen by the board from its own number or elected at the annual meeting of the association.

While the board of directors is usually given entire charge of the affairs of the home, in practice some of its powers are delegated to committees. In most instances these committees include an executive committee generally composed of the officers, which is given general charge of the home; a finance committee which has charge of the securities, funds, etc., and their investment; and an admission committee which interviews all applicants for admission, investigates their circumstances, sees to their having a physical examination if the rules require this, and reports to the directors.



In the case of homes whose sole support comes from the legacy of the founder of the home, there is no home association. A board of trustees is usually appointed under the will and these, while having control of the home funds and general oversight of the institution, usually select for the actual conduct of the home a board of managers, usually women, who perform the duties of a board of directors with power to appoint committees, etc.

The fraternal homes are generally administered through a corporation whose powers are vested in a board of trustees representing the supporting organization. Thus the Masons' and Odd Fellows' homes are usually supported by the grand lodge of the State, which therefore either controls the board or is represented upon it. In the latter case provision is also made for the representation of the local lodges. In the case of a national home, like that of some of the other orders, the national grand lodge controls the home through its board of trustees.

As in the private homes the actual duties are delegated to committees appointed for the purpose.

The machinery of administration of the homes of religious groups varies according to the degree of support and control by the religious organization. Where the whole support comes from the church organization as such the home is usually administered through a board of trustees elected by the annual meeting of the church conference. In other cases where the financial connection is not so close a separate association is formed whose membership consists of the individuals who are members of the churches; and the various churches of the denomination in the district may also be admitted as members. Annual dues are paid in each case in amounts varying according to the class of membership taken out. Under this latter arrangement the directing board is elected by the members of the association, the procedure from this point on being the same as in the private community homes, except that in some cases where the churches are members there is a limit upon the number of directors who may be elected from any one of the member churches.

#### Handling of Complaints

One of the important committees is that which is called variously the "welfare committee," "complaint committee," "house committee," or "visiting committee."<sup>5</sup> This committee is the safety valve of the residents of the home, for to it they may air whatever grievances they may have or think they have. Tact is the essential qualification of this committee, for it must steer a middle and impartial course between matron and guests. One of its hardest problems is to determine what complaints are justified. Some of the old people are subject to delusions of persecution, and fancy all sorts of wrongs and neglect. In such cases the committee must satisfy itself that there is no basis for the accusations made, without giving offense to the matron.

On the other hand, the committee can not ignore any complaint, however trivial, for fear it may prove to be justified. It should be remembered that the old people are, for all practical purposes, in the power of the matron and should she be of an undesirable type this is a

<sup>5</sup> In some cases there is no committee for this purpose; complaints are submitted directly to the board of directors at its regular meetings.



serious matter. One home, well furnished, but looking singularly bleak and uninhabited for all its good furniture, was visited in which it is doubtful if the guests would dare to complain even to the committee, so fearful were they of the matron, and so afraid of their consequent treatment by her if they complained.

#### The Home Matron or Superintendent

In general the home is under the direction of a matron. The matron is responsible for the running of the home, the meals, and the general welfare of the inmates. In larger institutions she may work under the direction of a resident male superintendent; though there are exceptions to this, in such cases it is a general practice to hire a married couple, the husband acting as superintendent and the wife as matron.

The matron holds the "key position" in the home. Her duties are many and various. In the small homes she does the greater part, if not all, of the work. True, the old people usually give what help they can. It is a general practice for the inmates, who are able to do so, to care for their own rooms except when these are given the (usually) weekly thorough cleaning, and the matron is therefore spared this part of the work. The help of the guests is uncertain at best, however, for they may feel able to help one day, and feel ill the next. But the household duties go on forever.

Homes were visited in which the matron also acts as cook; also several in which she even does part of the laundry work. In one home, in addition to her other duties the matron makes all the butter for the home family of about 60 persons. In another home, which was visited during the housecleaning season, a man and his wife and son do all the work. The man is a practical farmer whose whole time is absorbed in the home farm, while the wife acts as matron. At the time of the visit she was doing the cooking and other housework for a family of nine old men and was trying to clean house in the intervals. The son, a boy of high-school age, cares for the yard and chickens.

The larger the home, of course, the more assistance is given the matron. A cook and one or more general helpers are employed; in some cases a "housekeeper" who, either personally or with helpers, attends to getting the kitchen work and general housework done.

Usually the laundry work (or a greater part of it) is done in the home, and some effort is made to lighten this work. Where the home was located in a country district and electricity was not available or was too expensive, instances were found in which the ironing was being done in the kitchen, the irons being heated on a coal range. Electric washers and electric irons are practically universal, however, and many homes have either a hand or electric mangle for the flat work. Extractors are also becoming a fairly common appliance in the home laundries.

Only about half of the homes have resident nurses, and where there is no nurse the matron is expected to act as nurse in cases of slight illness. But this becomes a serious additional burden in those homes where most of the other work is done by the matron; especially is this true where the patient requires care at night. In one home, caring for both children and old people, the matron (a registered nurse) has given personal care to one inmate who has been bedridden for four years in a room adjoining that of the matron. This old lady has

softening of the brain and is completely helpless. But so well has she been cared for that she is otherwise in good condition and without a bed sore.

It is a general practice, however, in case of extended illness in homes which have no resident nurse, to call in a nurse to care for the patient. Even in such cases the matron must assume part of the burden, for the nurse can not be expected to work day and night.

But aside from the practical work of the home, the matron has very important functions to perform. The happiness and well-being of the inmates are in her hands. From their point of view she is the all-important part of the home, for she can make it a real home or a place of torment for them. An attractive personality, endless patience and tact, ready sympathy, and a real interest in the guests as individuals—these are indispensable in the matron if the institution is to fulfill its purpose of being a home. To have the bodily comforts provided is good, but these old people need something more. They are like children in their need of attention and affection, and even luxury without these is barren to them.

That the matrons are, to a surprising degree, making the homes real homes is worthy of note. It should be emphasized here that the matrons of the homes visited (with some few exceptions which stand out by the very reason of their infrequency) are a most remarkable group of women. Most of them are women of middle age or older, women of experience, and in many cases women formerly of some means who have lost their husbands or their money, or both. In several instances they had had training or experience in social work of various kinds. Quite generally they were interested in doing their jobs as efficiently as possible and had been at some pains to find out how other matrons were meeting their problems. One matron spends her vacations visiting other homes to get "pointers."

A sense of humor is a great asset in this work, and most of the successful matrons are gifted with this. One matron said she'd "die the death of seven rag dolls," if she couldn't see the funny side of life in the home. Another is writing a book on her life in an old ladies' home.

Almost invariably the low-grade matron, the dreary home, and the dull-looking inmates were found together. The dreariness of the home was not necessarily a matter of furnishings or material comforts. Some of the shabbiest homes were the happiest. It usually meant that the matron didn't care or know how, or lacked the homemaking touch.

The success of the matrons, generally, is all the more noteworthy when their problems are considered. The old people enter the home with all their habits formed and must be accepted as they are. Many are cheery and lovable, but many, also, are crabbed, irritable, and crotchety. There are some whom it is impossible to please and these, strange to say, are usually those who have had the least before coming into the home. Especially as they get along in years, they get "notions," perhaps even ideas of neglect and ill-treatment. As one matron said: "They are just like children, but with this disadvantage, that you can't discipline them as you would a child." Some are unreasonable and have an exaggerated idea of the advantages to which their entrance fee entitles them. Some try to interfere with



the servants and to "boss the house," forgetting they are no longer in their own homes.

In many cases the matter of discipline or correction of the residents is in the hands of a committee; the matron may report any repeated infractions of rules or any unbecoming conduct on the part of the guests, but she can take no action. In other instances the matter is entirely in her hands. This is unfortunate, however, for as already stated, she has the power to make life very unpleasant for the inmates if she cares to, and can do this even when she can take no open disciplinary measure. Where she is allowed the latter function the guests can only appeal to the board of directors, if they dare.

Many matrons assume little or no authority over the inmates, but treat them merely as fellow residents presumably trying to make the home as pleasant as possible. In one home the matron is called the "hostess," and she assumes her position to be that and nothing more. One matron, a superior woman of alert intelligence and understanding, who had had a good deal of experience in many lines of work—all dealing with people—said the idea of old people having to submit to regulation and discipline was abhorrent to her. Others, while not expressing themselves on the matter, evidently take the same view and allow the guests all possible latitude consistent with peace and order.

Other matrons, however, feel that their position is one of almost parental authority and act accordingly. In one home visited, one old lady had just been released from her room after two weeks' confinement there as punishment for fault finding. In another the guests were obviously in fear of the matron, a coarse overbearing woman who was nevertheless all smiles in greeting a committee from the church which supports the home.

Generally, the matrons treat the residents tolerantly and with a genuine desire to visualize their point of view. But in a few cases, which were outstanding because of their small number, the guests were spoken to and ordered around with no consideration for their feelings whatever. One superintendent, a conceited, swaggering man, spoke of the residents, in their hearing, as "hogs," saying that the men who went to such homes were all "bums" and the women all "dope fiends."

While the spirit of some of the old people in these homes has been broken to the point of humility by their position, the humiliation of people of spirit who find themselves exposed to such treatment must be a constant thorn to them.

There are undoubtedly cases in which guests are hopelessly disagreeable and nothing can be done with them, but in general it is true that to a great extent the residents reflect the attitude of the matron toward them and the home. If she loves them, they love her, and show it. Where no interest is taken in them, they take no interest in themselves. In one home visited, the old ladies had formerly gone around with their hair uncombed, their shoes unbuttoned, wearing kitchen aprons all day, etc. The matron said that when she came into the home they were the "bluest looking lot of people she ever saw." By a word of praise or interest here and there, a suggestion as to how pretty white hair is when it is well cared for, etc., a change of attitude has been effected that is surprising. The



guests in this home now take pride in dressing themselves up and looking their best. They go in for all the little fads—shoulder knots of ribbon, flowers, etc.—and have even begun to take an interest in current events. They read the newspapers and the new books, and can talk intelligently on what is going on.

This is in direct contrast with another home, filled with apathetic old people of both sexes, who, according to the superintendent, feel that they are simply there to "await the end."

One Jewish home was visited whose matron was a middle-aged Irish woman. She had been in the home for 30 years, and had a heart full of love for the old people. They were like well-loved children to her. They, on their part, quite plainly adored her. Most of them were so old as to be childish and need a good deal of direction and advice about such serious matters as whether an extra wrap is necessary to wear out upon the porch on a sunny day. All of which she gives patiently.

In another home, caring for nine old ladies, the matron had been called away unexpectedly and the bureau's agent was shown through the home by one of the guests. This was a delightful place. Everything was shining with cleanliness. The old lady guide said the guests "just loved" it there and thought the matron was perfect—so thoughtful and considerate. They, to show their appreciation, tried to be as little trouble as possible, and took pride in keeping the tablecloth spotless, to help the matron.

The matron of one of the most homelike places is a spirited and incorrigibly humorous person, and she has managed to infuse her "never say die" spirit into the residents. They are the most alert and sprightly group found anywhere, and not one is younger than 76 years of age. She is on the most familiar terms with them, calling one "Dad," another "Ma," another "Auntie," and so on. They think she is lovely because she is never "stiff" with them, as they say. The home atmosphere is remarkably good. Practically all the light work is done by the guests and they are busy and happy, taking an interest in all the affairs of their church and in what is going on generally.

Another problem faced by the matron is that of so many masters. The matron must be able to work successfully with the various committees. In some homes the matron has practically a free hand; she works on a budget, purchases the provisions and even minor household equipment, and hires and fires the other employees. In other instances, however, her authority is much restricted; there may be a committee which buys the groceries and household supplies, another which assigns the bedrooms, another which visits the home to see if there are any complaints, etc., while the hiring and firing of employees is done by the board of directors. While there is nothing that will keep a matron "on her toes" more successfully than the knowledge of a good live committee on the job, nevertheless such strict and constant supervision (even amounting to unwarranted interference in some cases) is likely to prove decidedly irksome to a capable woman of spirit. "Oh, these committees!" said one highly intelligent and successful matron. "They nearly drive me mad. My friend Mrs. A [matron of an endowed home in the same city] can thank her stars she has only one man to please."

In one large institution several rooms on the first floor are reserved for the use of the directors, each of whom has a key to the building. The superintendent says he often wakes up in the morning and finds that one or two of the directors have arrived unexpectedly during the night.

In another home a committee member will drop in at odd times—perhaps in time to take a meal there—just to be sure everything is going on as it should.

Not all the committees are so active and interested as those just cited, however. The home association of one institution has a committee that comes to the home “about once a year” to see how things are going, and whether there are any complaints.

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### Status of Old-Age Pension Legislation in the United States

**D**URING the year 1929 four States—California, Minnesota, Utah, and Wyoming—provided for the establishment of old-age pension systems. This brings the total number of States having old-age pension legislation up to 10 (not including Alaska), as Colorado, Kentucky, Maryland, Montana, Nevada, and Wisconsin already had this type of legislation.

The action of Congress and the Legislature of Alaska in providing for the aged in that Territory is especially significant. Congress, in 1906 (24 Stat. 192) provided that all moneys received for liquor licenses and occupation and trade licenses, outside of the incorporated towns of Alaska, be held as a separate fund to be known as the “Alaska fund.” An amendment of 1913 devoted 10 per cent of such fund to the relief of “persons in Alaska who are indigent and incapacitated through nonage, old age, sickness, or accident.” (37 Stat. 728.) The Alaska Legislature of the same year (Acts of 1913, ch. 80) provided for an “Alaska pioneers’ home” in which residents of five years’ standing might be cared for if in need of aid because of physical disability or otherwise. In 1915 the Territorial legislature (Acts of 1915, ch. 64) provided that outdoor allowances up to \$12.50 a month might be granted, in lieu of care by the Pioneer Home, to certain pioneers who had reached the age of 65. In 1923 (Acts of 1923, ch. 46), men 65 years of age and women 60 years of age, who had been 15 consecutive years in residence in Alaska immediately prior to application, were allowed up to \$25 and \$45 a month, respectively.

The first State statute attempting to provide a system of old-age pensions was the act of the Arizona Legislature of 1914 (Acts of 1915, Initiative Measures, p. 10) abolishing almshouses and establishing old-age and mothers’ pensions. The supreme court of that State found the law lacking in “a clear statement of the means and method of its enforcement”; and as technical defects were also found, the act was declared void. (State Board of Control *v.* Buckstegge (1916), 18 Ariz. 277, 158 Pac. 837.)

The year 1923 was probably the beginning of the present movement in favor of the passage of old-age pension legislation. In that year, Nevada, Montana, and Pennsylvania established old-age pension systems and Alaska liberalized its law. The Pennsylvania law was declared unconstitutional in 1925, the decision being based largely



on a clause in the State Constitution which forbids the legislature from making appropriations for charitable, benevolent, or educational purposes. (*Busser v. Snyder* (1925), 282 Pa. 440, 128 Atl. 80.<sup>1</sup>) In 1925 Nevada repealed the act of 1923 and enacted a new law. In the same year Wisconsin was also added to the States having old-age pension laws. Kentucky acted in 1926, Colorado and Maryland in 1927, and California, Minnesota, Utah, and Wyoming in 1929. The Massachusetts act establishing a public bequest fund (Acts of 1928, ch. 383) can hardly be considered an old-age pension act.<sup>2</sup>

All of the legislation has been influenced or based upon the provisions of what has become known as "The standard bill" for old-age pensions.<sup>3</sup> Of the 11 acts analyzed, 6 (California, Colorado, Kentucky, Minnesota, Montana, and Wisconsin) follow the 70-year age qualification found in the standard bill. Maryland, Nevada, Utah, and Wyoming fix the minimum age at 65 years, and Alaska at 65 for males and 60 for females.

The standard bill fixes the maximum pension at \$1 a day. This provision is followed in 6 States (California, Colorado, Maryland, Minnesota, Nevada, and Wisconsin). Wyoming fixes the maximum at \$30 a month, Montana and Utah at \$25 a month, and Alaska fixes the maximum at \$25 a month for males and \$45 a month for females. Kentucky fixes the maximum on a yearly basis of \$250.

The residence qualifications, as found in the standard bill, provide that the applicant must have resided in the State at least 15 years immediately preceding the date of application (with certain exceptions). Nine acts require a residence of 15 years, within the State, but those of Kentucky and Nevada require only 10 years' residence. All of the laws except those of Alaska, Montana, and Nevada also require residence within the county—in Colorado, Maryland, Minnesota, and Wisconsin for 15 years; in Kentucky for 10 years; in Utah and Wyoming for 5 years; and in California for 1 year. All of the States, Alaska excepted, require that the claimant must have been a citizen of the United States for 15 years. The Alaskan law excepts from its terms natives and Indians.

The standard bill provides that an old-age pension shall not be granted to a person if the value of his property exceeds \$3,000. This requirement is followed in the California, Colorado, Maryland, Minnesota, Nevada, and Wisconsin acts. The Kentucky act provides that if the assets amount to \$2,500 or more or the income amounts to \$400 a year or more, no pension will be allowed. In Wyoming a maximum property limitation is based on an income of \$360 a year, while in Montana and Utah an income of more than \$300 a year will prevent a claimant from being awarded a pension. The Alaskan act provides that a person, in order to be awarded an allowance, shall have no other means of support.

In Alaska the Territory provides the funds for the payment of the pension. In California the State provides one-half and the county or city and county provide the other half of the cost of the pension. In Wisconsin the act provides that one-third of the cost will be refunded to the county by the State. It will be seen that the great

<sup>1</sup> See also *In re Opinion of the Justices*, 1917, 78 N. H. 617, 100 Atl. 49.

<sup>2</sup> See *Monthly Labor Review*, August, 1928, p. 82 and March, 1929, p. 31.

<sup>3</sup> *The American Labor Legislation Review*, December, 1928, p. 430.



majority of the acts place the cost of the system upon the county and in some instances on the city, town, and village. With the exception of Alaska, no State follows the term of the standard bill which provides in section 19 that "The funds for the payment of old-age pensions shall be furnished by the State of——."

California has set up probably the best American system of administration; a division of State aid to the aged in the California Department of Social Welfare has been set up. The county and city, and county boards of supervisors, in addition to their other powers and duties in relation to the care and support of the poor, are now required to receive and act upon applications for old-age pensions. The law provides that the duties of the division of State aid to the aged "shall be to supervise and pass upon the measures taken by county or city and county boards of supervisors for the care of needy aged citizens, to the end that they may receive suitable care in their old age and that there may be, throughout the State, a uniform standard of record and method of treatment of aged persons based upon their individual needs and circumstances."

Five States (California, Montana, Nevada, Utah, and Wyoming) provide administration by county boards, while five others (Colorado, Kentucky, Maryland, Minnesota, and Wisconsin) provide that the county or circuit judge shall decide who will receive pensions. The Alaskan act provides that the board of trustees of the Alaska Pioneers' Home shall decide who shall receive pensions.

Of the 11 existing laws probably none can be strictly classed as mandatory or compulsory. Each law sets forth the conditions under which pensions will be allowed, ranging from the Alaskan law, which appears to be mandatory in that the board must investigate all applications in the Territory, down to the Minnesota law which authorizes any county to establish a system of old-age pensions after obtaining a majority of votes in a county, at a general election, in favor of the establishment of the system in the county.

The Alaskan law provides that the board of trustees of the Alaska Pioneers' Home shall investigate applications "and if they find that his or her case is worthy and that he or she is in actual need of such allowance, the said trustees shall enroll him or her as a beneficiary under this act." The California law provides that "subject to the provisions of this act, every person residing in the State of California, if in need, shall be entitled to aid in old age from the State" and that "it shall be" the duty of the board of supervisors to receive and act upon applications for aid. The Montana and Wyoming laws provide that "there shall be established in each county of the State" an old-age pension commission which "shall perform all the duties imposed upon it by this act" and "Every person (man or woman, married or single) shall, in the discretion of the old-age pension commission while residing in the State of Montana," and Wyoming, "be entitled to a pension in old age subject to the restrictions and qualifications hereinafter noted." The Utah law provides that the board of county commissioners of each county in the State "shall have the power to provide funds in the county treasury for the purpose of carrying out the provisions of this act." The Nevada law provides that the board of county commissioners and certain others in each of the counties of the State "may and they are hereby empowered and

authorized to provide funds in an amount sufficient to carry out the provisions and requirements of this act."

Five States (Colorado, Kentucky, Maryland, Minnesota, and Wisconsin) provide optional features in which it is definitely stated in the law that the county may elect to adopt the old-age pension system. The States differ in that they make it more or less difficult for the county to adopt the system. The Minnesota law is probably the most difficult, in that while it authorizes any county in the State to establish a system of old-age pensions, "before so doing the proposition of the establishment of such a system shall be duly submitted to the legal voters of the county at the ensuing general election to be held therein, and if a majority of the legal voters voting at such election shall vote in favor of the establishment of such a system then it shall be established in said county pursuant to the conditions of this act." The Colorado law provides "Whenever by the affirmative vote of two-thirds of the members elected to the board of county commissioners in any county of this State, any county or city and county in this State may establish a system of old-age pensions in accordance with the provisions of this act." The Wisconsin act provides that "Any county is hereby authorized, through a majority vote of the members elected to its county board to establish a system of old-age pensions." The Maryland act provides that "The mayor and council of the city of Baltimore, or the county commissioners of any county, are hereby authorized to establish a system of old-age pensions in accordance with the provisions of this article." The Kentucky law provides that "the fiscal court or county commissioners of each of the counties of the State may, after first adopting the provisions of this act, establish a system of old-age pensions in accordance with the provisions provided herein."

Of the 11 old-age pension acts that of California is reproduced below for several reasons: The California act was the latest enacted, having been signed by the governor May 28, 1929. It sets up probably the best organization to administer the law. The State provides one-half the cost of the pensions. The act follows in general outline and in many sections the phraseology of the "Standard bill." The State of California is one of the largest in size and population of the States having old-age pension systems.

*California old-age pension act*

*(Acts of 1929, ch. 530)*

SECTION 1. Subject to the provisions of this act, every person residing in the State of California, if in need, shall be entitled to aid in old age from the State.

SEC. 2. Aid may be granted under this act to any person who:

- (a) Has attained the age of 70 years.
- (b) Has been a citizen of the United States for at least 15 years before making application for aid;
- (c) Resides in the State of California and has so resided continuously for at least 15 years immediately preceding the date of application, but continuous residence in the State shall not be deemed to have been interrupted by period of absence therefrom if the total of such periods does not exceed 3 years; or has so resided 40 years at least 5 of which have immediately preceded this application;
- (d) Resides in the county or city and county in which the application is made and has so resided continuously for at least 1 year immediately preceding the date of application;



(e) Is not at the date of making application for aid an inmate of any prison, infirmary, insane asylum, or any reform or correctional institution;

(f) If married, has not, during the 15 years preceding the date of application deserted the other spouse or without just cause failed to provide legal support for such other spouse and the minor children, if any, of such applicant;

(g) Has no children or other person able to support him and responsible under the law of this State for his support.

SEC. 3. The amount of aid to which any such person shall be entitled shall be fixed with due regard to the conditions existing in each case, but in no case shall it be an amount which, when added to the income of the applicant from all other sources, including income from property as computed under the terms of this act, shall exceed a total of \$1 per day.

SEC. 4. Aid under this act shall not be granted or paid to any person the value of whose property, or, if married, the value of the combined property of husband and wife, at the time of such application exceed \$3,000.

SEC. 5. The income of the applicant at the time of such application shall be computed on the basis of an average income during the 12 months next preceding the date of such application; the annual income of any property of applicant which does not produce a reasonable income shall be computed at 5 per cent of the value of such property.

SEC. 6. (a) There is hereby created in the State department of social welfare a division to be known as the division of State aid to the aged. The duties of this division shall be to supervise and pass upon the measures taken by county or city and county boards of supervisors for the care of needy aged citizens, to the end that they may receive suitable care in their old age and that there may be, throughout the State, a uniform standard of record and method of treatment of aged persons based upon their individual needs and circumstances.

The State department, through the division of State aid to the aged, and the board of supervisors of each and every county and city and county in the State shall follow the policy of giving the aid provided for under this act to each and every applicant in his own or in some other suitable home, in preference to placing him in an institution.

(b) The board of supervisors of each and every county and city and county in the State, in addition to their other powers and duties in relation to the care and support of the poor, as provided by law, are hereby authorized and empowered, and it shall be their duty, to receive and act upon applications for aid under and in accordance with this act, and to provide funds in their respective county or city and county treasury, and to do all other acts and things necessary in connection with the same for the purpose of carrying out the provisions of this act in so far as such provisions relate to such county or city and county.

SEC. 7. The division of State aid to the needy aged shall be administered by a chief. The director of social welfare, with the approval of the governor and the members of the social welfare board of the State department of social welfare, shall appoint and fix the compensation of the chief of the division of State aid to the aged, who shall be a person with training and experience in relief work and familiar with the social and economic conditions in California. The chief of the division shall be responsible for the investigation, determination and supervision of State aid given under this act and for the performance of such other duties as may be assigned to the division by the director of social welfare.

SEC. 8. The chief of the division, with the approval of the director of social welfare, may appoint in each county and city and county an advisory board of citizens whose duty it shall be to cooperate with the proper State and county authorities in the investigation and supervision of aid given to the aged under this act and to make report upon the same with recommendations to the board of supervisors and to the department of social welfare. In counties or in any city and county where there is an existing county or city and county department of public welfare or board with similar functions in public relief, this body shall be appointed as the advisory board.

SEC. 9. If the board of supervisors shall deem it necessary, it may, with the consent of the State department, require as a condition to the grant or continuance of aid in any case, that all or any part of the property of a person applying for aid be transferred to said board of supervisors. Such property shall be managed by said board of supervisors which shall pay the net income thereof to such person; said board of supervisors shall have power to sell, lease, or transfer such property or defend and prosecute all suits concerning it and to pay all just claims against it and to do all things necessary for the protection, preservation



and management thereof. If, in the event such aid is discontinued during the lifetime of such person, the property thus transferred to the board of supervisors exceeds the total amount paid as aid under this act, the remainder of such property shall be returned to such person; and in the event of his death such remainder shall be considered as the property of the deceased for proper administration proceedings. The board shall execute and deliver all instruments necessary to give effect to this section.

SEC. 10. (a) If, at any time during the continuance of aid, the recipient thereof or the husband or wife of the recipient, become possessed of any property or income in excess of the amount allowed by law in respect to the amount of aid granted, it shall be the duty of the recipient immediately to notify the board of supervisors of the receipt and possession of such property or income and the board may, on inquiry and with the approval of the State department, either cancel the aid or vary the amount thereof in accordance with circumstances, and any excess aid theretofore paid shall be returned to the State of California and be recoverable as a debt due the State of California.

(b) If, on the death of recipient of aid under this act, it is found that he was possessed of property or income in excess of the amount allowed by law in respect to the amount of aid, double the amount of the aid paid in excess of that to which the recipient was legally entitled may be recovered by the department of social welfare as a preferred claim from his estate and upon recovery shall be paid into the treasury of the State of California.

SEC. 11. All aid given under this act shall be absolutely inalienable by any assignment, sale, attachment, execution, or otherwise and in case of bankruptcy the aid shall not pass through any trustee or other person acting on behalf of creditors.

SEC. 12. Any and all aid granted under the provisions of this act shall be deemed to be granted and held subject to the provisions of any law that may hereafter be enacted amending or repealing in whole or in part the provisions of this act, and no recipient under this act shall have any claim for compensation or otherwise by reason of his aid being affected in any way by any such amending or repealing act.

SEC. 13. Every applicant for aid shall file his application in writing with the board of supervisors of the county or city and county in which he resides, in the manner and form prescribed by the State department. All statements in the application shall be verified, under oath, by the applicant.

SEC. 14. The board of supervisors, directly or through the advisory board or other authorized investigator, shall upon the receipt of an application for aid promptly make the necessary investigation. It shall, upon receipt of the report of the investigation, decide upon the amount of aid, if any, and such decision shall be final: *Provided, however,* That in any case where such application is denied by the board of supervisors, the applicant, upon filing a petition with the department of social welfare setting forth the facts in full as to the necessity of such aid, verified by five reputable citizens of the county, shall have the right of appeal direct to said department of social welfare, and if the appeal is sustained by said department the payments of aid in the amounts determined by said department must be paid by the county or city and county as herein provided. An applicant whose application for aid under this act has been rejected may not again apply for such aid until the expiration of one year from the date of the previous application. If the application for aid be granted, the clerk of the board of supervisors shall report the fact to the auditor of the county or city and county. All payments of aid under this act shall be made monthly by the treasurer of the county or city and county in the manner provided by law for payment of claims against the county or city and county. All aid under this act shall be renewed annually on verified applications and after such further investigations as the board may deem necessary, and the amount of aid may be changed if the board finds that the recipient's circumstances have been changed. It shall be within the power of the board of supervisors to cancel and revoke aid for cause and it may for cause suspend payments for aid for such periods as it may deem proper.

SEC. 15. The clerk of the board of supervisors of each county and city and county shall report monthly to the said State department in such manner and form as the latter may prescribe, the number of applications granted, and the grants of aid changed, revoked or suspended under this act by the board during the preceding calendar month, together with copies of all applications received and a statement of the action of the board thereon, and shall report the amount

of aid to aged paid out under this act by said county or city and county during said period. Claims for State aid granted under this act shall be presented by the respective counties and city and county semiannually in January and July of each year. Such claims shall be audited by the State department of social welfare and the State controller and, when approved, the State controller shall draw the necessary warrants and the State treasurer shall pay to the treasurer of said county or city and county a sum equal to one-half of the total amount of payments made by said county or city and county to aged citizens as aid under the provisions of this act during the period for which said claim is made.

SEC. 16. The State department of social welfare shall have power to and shall prescribe the form of application, the manner and form of all reports and such additional rules and regulations as are necessary for the carrying out of the provisions of this act.

SEC. 17. All necessary expense incurred by county or city and county boards of supervisors and advisory boards, in carrying out the provisions of this act, shall be paid by the county or city and county in the same manner as other expenses of such county or city and county are paid.

SEC. 18. If at any time the State Department has reason to believe that aid to the aged has been obtained improperly, it shall cause special inquiry to be made and may suspend payment of any installment pending the inquiry. It shall notify the board of supervisors and advisory board of such suspension. If it appears upon inquiry that the aid was obtained improperly, it shall be canceled by the State department, but if it appears that aid was obtained properly the suspended payments shall be payable.

SEC. 19. Any person who by means of a false statement or representation or by impersonations or other fraudulent device obtains or attempts to obtain or aids or abets any person to obtain under this act:

- (a) Old-age aid to which he is not entitled;
- (b) A larger amount of aid than that to which he is justly entitled;
- (c) Payment of any forfeited installment grant;
- (d) Or knowingly aids or abets in buying or in any way disposing of the property of an applicant without the consent of the board of supervisors, shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not more than \$500 or by imprisonment for not more than six months or by both such fine and imprisonment.

SEC. 20. Any person who knowingly violates any provision of this act for which no penalty is specifically provided shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not more than \$500 or imprisoned for not more than six months or by both such fine and imprisonment.

SEC. 21. There is hereby appropriated, out of any moneys in the State treasury not otherwise appropriated, to each and every county and city and county maintaining or supporting aged persons who come within the provisions of this act, aid not in excess of \$180 per annum for each such aged person maintained or supported by such county or city and county. Payments of such aid shall be made in the manner provided in section 15 of this act.

SEC. 22. There is hereby appropriated, out of any moneys in the State treasury not otherwise appropriated, the sum of \$20,000 for the expenses of the State department of social welfare in the administration of this act during the eighty-first and eighty-second fiscal years.

SEC. 23. Nothing in this act shall be construed as repealing any other act or part of an act providing for the support of the poor except in so far as inconsistent therewith, and the provisions of this act shall be construed as an additional method of supporting and providing for the aged poor. This act shall be liberally construed. If any portion of this act shall for any reason be adjudged by any court of competent jurisdiction to be invalid or unconstitutional, such judgment shall not affect, impair, or invalidate the remainder of this act.

SEC. 24. No aid granted under the provisions of this act shall be available or made payable before January 1, 1930.

## OLD-AGE PENSION SYSTEMS IN THE UNITED STATES

State	Age	Maximum pensions	Residence (in years)			Maximum property limitations	Administered	Funds	Citation
			United States	State	County				
Alaska	165 60	\$25 a month for males, \$45 a month for females.		15		Shall have no other sufficient means of support.	Board of trustees of Alaska Pioneers Home.	Territory	Acts of 1923, ch. 46. (See also Acts of 1915, ch. 64; Acts of 1913, ch. 80.)
California	70	\$1 a day	15	15	1	Assets, \$3,000	County or city and county boards of supervisors.	Payment by county, or city and county. One-half to be refunded by State.	Acts of 1929, ch. 530.
Colorado	70	do	15	15	15	do	County judge	County	Acts of 1927, ch. 143.
Kentucky	70	\$250 a year	15	10	10	Income, \$400 a year; assets, \$2,500.	do	do	Acts of 1926, ch. 187.
Maryland	65	\$1 a day	15	15	15	Assets, \$3,000	Circuit court of county or superior court of Baltimore.	County, or city of Baltimore.	Acts of 1927, ch. 538.
Minnesota	70	do	15	15	15	do	District judge	Payments by county. Cities, towns, and villages to reimburse county.	Acts of 1929, S. F. No. 102.
Montana	70	\$25 a month	15	15		Income, \$300 a year	County commissioners, as old-age pension commissioners.	County	Acts of 1923, ch. 72.
Nevada	65	\$1 a day	15	10		Assets, \$3,000	Board of county commissioners.	do	Acts of 1925, ch. 121.
Utah	65	\$25 a month	15	15	5	Income during past year, \$300.	do	do	Acts of 1929, H. B. No. 28.
Wisconsin	70	\$1 a day	15	15	15	Assets, \$3,000	County judge	Payments by county. State to refund one-third; city, town, and village to refund two-thirds.	Acts of 1925, ch. 121.
Wyoming	65	\$30 a month	15	15	5	Income, \$300	County commissioners as old-age pension commission.	County	Acts of 1929, ch. 87.

1 Males.

1 Females.



## Occupational Diseases: Definition, Cause, Prevalence, and Prevention<sup>1</sup>

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**A**N OCCUPATIONAL disease may be defined as an affliction which is the result of exposure to an industrial health hazard. There may be exposures to more than one hazard with corresponding complicated afflictions.

An industrial health hazard may be defined as any condition or manner of work that is unnatural to the physiology of the human being so engaged. This physiology is adaptable through gradual tolerance to quite wide variations in environment and experiences, but the rule holds absolute that subjection to conditions which are unnatural to the physiology, including the adaptability of man, results in pathology or disease.

### Causes of Occupational Diseases

CAUSES OF OCCUPATIONAL diseases are multiple, but may be grouped briefly under two headings: (1) The personal status or physical health of the individual and his personal hygiene or mode of life; and (2) hazards in the environment which may be natural, that is, due to the location on the world's surface, or occupational. Dismissing the first of these and concentrating upon the subject of the occupational hazards, I think they are best classified as follows:

#### *Classification*

#### I. Specific occupational diseases:

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| 1. Poisonings.                    | 6. Diseases following injuries.    |
| 2. Mechanical irritations.        | 7. Illumination afflictions.       |
| 3. Friction and tension diseases. | 8. Temperature disabilities.       |
| 4. Fatigue diseases.              | 9. Noise deafness.                 |
| 5. Infections.                    | 10. Atmospheric pressure diseases. |

#### II. Diseases partly occupational, i. e., hazards elsewhere (personal, housing, recreational, geographical):

- |                        |                        |
|------------------------|------------------------|
| 1. Respiratory system. | 6. Nerves and muscles. |
| 2. Circulatory system. | 7. Eye and ear.        |
| 3. Urogenital system.  | 8. Bones.              |
| 4. Alimentary system.  | 9. Endocrinal system.  |
| 5. Skin.               | 10. Nutrition.         |

#### III. Occupational health complaints, i. e., predisease conditions with attacks of: Headache, sleeplessness; dyspepsia, constipation, diarrhea; aches, pains numbness, weakness, cramps, stiffness, tiredness; itching and burning of skin; colds, coughs, etc.

#### IV. Nonconformities advanced by occupation: Postural defects; habit or method defects which waste energy.

### Discussion

#### Specific Occupational Diseases

THESE ARE THE afflictions which rarely, if ever, occur outside of industry. Specific occupational diseases are fairly common but only rarely are deaths directly due to them. In certain industries, such as

<sup>1</sup> Address before the New England Health Institute, Hartford, Conn., Apr. 23, 1929.

the manufacture or repair of storage batteries, a specific occupational disease like lead poisoning may have a high incidence. It should be noted, however, that these diseases are very apt to be the beginning of other afflictions and to pass into chronic, partly occupational diseases (see p. 46). The diagnosis itself or knowledge of the place of origin usually indicates that they are occupational. Any doubt is expelled if upon investigation the occupational hazards which are known to produce the affliction in question are actually found to exist. It is worth noting that on this basis British laws and those of Ontario place the burden of proof of any other cause than occupation upon the employer for a definite list of some twenty-odd afflictions.

Practically every health hazard may produce a specific occupational disease; for example, the following:

1. The poisons, such as lead, evidenced by definite signs like colic, bilateral wrist drop with escape of the *supinator longus* muscles, etc.
2. Mechanical irritants, such as mineral dust, producing dermatitis, silicosis, etc.
3. Friction, such as constant pressure against the body or rubbing, producing callosities, worn teeth, or certain bony overgrowths, bursitis, etc.
4. Fatigue, especially self-same movements often repeated, or prolonged strain; for instance, sewing, writing, holding pneumatic tools, constant postures—these finally producing deformities, neuroses, nervous breakdown.
5. Infections, of which there are not many, but occasionally certain ones are specifically occupational, such as anthrax from hides and wool, glanders from the horse, lumpy jaw from cattle, lockjaw from industrial wounds, typhoid fever limited to the employees of a certain plant where the drinking-water supply is found polluted, and the very common "machinist's boils" due to oils, cutting compounds, and lubricants.
6. Diseases following injuries at work, such as infections, deformities, and fibroses, which become, therefore, occupational diseases. Fortunately, the "first-aid" movement has greatly reduced this class of occupational afflictions. Note, however, that the Massachusetts Supreme Court has held that total incapacity due to a latent disease, syphilis, reawakened by an injury and resulting in insanity, must be compensated.
7. Illumination afflictions, such as glassworker's cataract, and inflamed eyes from electric flashes, called *electrica ophthalmia*; or prolonged work in deficient light, producing nystagmus or "dancing pupils," largely a disease of miners.
8. High temperature, producing thermic fever and heat stroke; or low temperature, producing local afflictions, such as frost bites, and general afflictions known as chilling and congestion in certain organs or parts, followed by typical diseases of these parts.
9. Noise, especially reverberating noises, producing deafness.
10. Atmospheric pressures, producing the various forms of compressed-air illness; or sudden concussions, producing ruptured ear drums; or, rarefactions, as in aviators, producing giddiness and perhaps temporary unconsciousness.

Without question all specific occupational diseases should be studied with a view to eliminating these causal hazards so far as

knowledge and feasibility permits. In this connection, I have repeatedly expressed the opinion that it is neither necessary nor wise to begin with the thought of prohibiting the use of dangerous substances; in fact, such prohibition in the case of useful articles would undoubtedly prove to be unconstitutional; for example, the prohibition of the use of motor gas, despite the enormous accident rates, or of fuel gas because of the many asphyxiations. As law is based upon reason, and no doubt upon utility, where articles of questionable utility such as phosphorus-containing fireworks and radium watch and clock dials are the issues, prohibition might constitutionally obtain. Measures under the pure food and drug act are illustrations. The use of the dangerous white phosphorus in matches was discontinued through the adoption of a Federal prohibitive tax upon such products, and not through a direct prohibition of the manufacture and sale of such products. A more likely expeditious method, amounting to prohibition, is that of control by agreements, which are occasionally brought about in industry to discontinue the use of dangerous poisons; for example, the recent agreement among leading manufacturers of fireworks to discontinue the use of white phosphorus. Where limited prohibition, tax, and agreement methods do not obtain, effective health regulations should be set up to control all known hazards to the health of workers and users. This was the adjustment in the ethyl gasoline question. It should be the adjustment in the benzol and lead questions, particularly if suitable substitutes of less hazardous character are not available.

Specific occupational diseases should be fully compensated when disability occurs, and I think it is decidedly unfortunate that a considerable number of our States, including certain insular possessions and Provinces, have adopted the British or European method of scheduling only certain ones for compensation. The unevenness and unfairness of this will be evident when the schedules for various States (see pp. 33 to 46) are read. Surely some one some day is going to question the constitutionality of legislation which permits compensation for carbon bisulphide poisoning and not for hydrogen sulphide poisoning.

#### National Peculiarities

The type of principal occupational diseases varies by countries, according to official reports. Switzerland and Germany report poisonings as the chief ones. England reports miners' nystagmus, which some authorities have said constitutes 60 per cent of the occupational diseases reported there. In South Africa the outstanding affliction, of course, is silicosis, and we are duly impressed with its importance there when we read Doctor Irvine's report that the Transvaal Government is spending approximately £1,000,000 per annum in compensating the affliction. (Reports of the fourth meeting of the International Permanent Committee on Occupational Diseases, League of Nations, Lyon, France, April 3-6, 1929.) Apparently silicosis is the outstanding affliction in Australia. In tropical countries like Porto Rico or Hawaii we have to consider the parasite which usually attacks the workers upon plantations, hookworm disease standing eminent. There is probably as much reason for calling hookworm disease there an occupational disease as calling anthrax here an occupational



disease. In America dermatitis is usually the chief reported affliction, while lead poisoning is the most serious.

*State, Insular, and Provincial Experience*

According to a study which I made of "The rôle of the State in industrial hygiene,"<sup>2</sup> there were in 1924, 9 State departments of labor and 21 State health departments which were receiving, or were supposed to receive, according to their laws and regulations, reports of occupational diseases:

*Labor departments*

California.	Minnesota.	Ohio.
Illinois.	New Jersey.	Pennsylvania.
Massachusetts.	New York.	Wisconsin.

*Health departments*

Alabama.	Maryland.	Ohio.
Arizona.	Massachusetts.	Oklahoma.
Colorado.	Michigan.	Oregon.
Connecticut.	Missouri.	Pennsylvania.
Illinois.	New Hampshire.	Rhode Island.
Kansas.	New Jersey.	Tennessee.
Maine.	New Mexico.	Wyoming.

Undoubtedly, many of the State departments, in adopting the standard regulations of the United States Public Health Service for reporting notifiable diseases, have thereby included the occupational diseases mentioned in classes E and F, but have forgotten all about them. My investigation showed that statistics upon these diseases were supposed to be available in 25 States, either from the department of health or the labor department, but, of course, such is not the case. In the discussion of the individual States which follows, those which are doing anything as regards reporting are given.

Occupational diseases are compensated according to the respective acts and regulations in a broad way; that is, by a "blanket" provision covering all occupational diseases, in the following States: California, North Dakota, Wisconsin, Massachusetts, and Connecticut; in Hawaii and the Philippines; and also under three Federal laws. They are likewise compensated to a limited extent, that is, by the schedule method, in Minnesota, Illinois, Ohio, New York, New Jersey, and Porto Rico. In some other States it might be possible to compensate some of them.

It is truly remarkable that such great industrial States as Pennsylvania and Michigan do not require the reporting or the compensating of occupational diseases despite the excellent work of Dr. Elizabeth B. Bricker and Dr. Henry Field Smyth in the former. We are glad to note the interest of Dr. Guy L. Keifer, director of health, and his recent establishment of a bureau of industrial hygiene in the Michigan Department of Health. So far as I know, nothing much is being done in such western industrial States as Missouri, Colorado, Montana, Idaho, and Washington, nor in any of the Southern States.

None of the Canadian Provinces have laws or regulations requiring the reporting of occupational diseases. However, certain occupa-

<sup>2</sup> American Journal of Public Health, August, 1925, pp. 681-686.

tional diseases are compensated according to the limited or schedule method (the English system) in a number of the Provinces, as discussed hereafter.

It is noteworthy that all forms of occupational afflictions, whether truly occupational or only partly so, are invariably greatest where industrial health hazards are found to be greatest. They are most frequent in the least natural occupations.

So much for the specific occupational diseases, the frequency of which we all know to be common enough when we consider the whole list. Let us now look at the individual States, Provinces, and insular possessions.

### *California*

In 1915 the word "accident" in the California compensation law was changed to "injury." This automatically brought all occupational diseases under compensation. No indemnity is payable for the first seven days of disability. Hon. William J. French, director of the California Department of Industrial Relations, writes:

It is a far better method than to name the diseases chargeable to industries. Not only does it simplify matters, but it enables the industrial accident commission to include diseases that are just as much a part of the occupation as those that may be named in a law. It also provides for the unusual situation where a man is incapacitated as an outcome of following his work. For example, a motion-picture actor in southern California had to stand in water on a cold day for a considerable period of time. He was chilled and pneumonia developed. All of the medical testimony was one way, and that man was fully entitled to the award which the commission sent out for compensation, medical, and hospital treatments. Pneumonia, generally speaking, would hardly ever come under the compensation system, but these isolated cases are entitled to every consideration.

California followed the Massachusetts change from "accident" to "injury." Our experience has been good, and no complaints have been registered against the simple procedure to include occupational diseases. Some of our insurance friends wrote long tearful pleas against the contemplated change on the ground that it would turn the compensation act into a health measure. This has not proved to be the case. The claimant has to convince the employer, or the employer's insurance carrier, an array of medical talent, the industrial accident commission with its long experience and its medical staff, and it is an entirely different matter from merely filing a claim and then being awarded compensation or medical benefits. In other words, there are too many hurdles to jump for a man to claim successfully under this broad system of administering compensation for occupational diseases, unless he has a meritorious claim.

I have been given a copy of the industrial injuries classified as occupational diseases (causing disability lasting longer than the day of injury) in the State of California for several calendar years, from which I abstract data for a few representative years, as follows:

	Fatal	Temporary
1919.....	3	452
1920.....	5	591
1921.....	—	576
1922 <sup>3</sup> .....	—	—
1923 <sup>3</sup> .....	—	—
1924 <sup>4</sup> .....	8	1,452
1925.....	1	1,310
1926.....	7	1,214
1927.....	—	1,339
1928 <sup>5</sup> .....	—	696
Total.....	24	7,630

<sup>3</sup> Not available.

<sup>4</sup> 1 permanent injury.

<sup>5</sup> First 6 months of 1928.

Thirty-six forms of poisonous substances, the leading ones being:

Fruit and vegetables and poison oak	586
Lead	153
Gassing	72
Petroleum and its products	64
Fish poisoning	40
Cement and lime	35

Three forms of pulmonary disease caused by dust and fibers (byssinosis, 1; pneumoconiosis, 2; and potter's rot, 1).

Fourteen infectious diseases, the chief of which were:

Sugar boils and dermatitis	52
Pneumonia and colds	20
Anthrax	13
Bronchitis	10
Influenza	10

Four afflictions chargeable to fatigue of one kind or another:

Electric ophthalmia	4
Amblyopia	3
Kleig eyes	2
Miner's nystagmus	1

Three afflictions due to cramps and nervous affections:

Neurosis and neuritis	52
Boilermaker's deafness	10
Writer's cramp	2

Four afflictions due to inflammation of joints and tendons:

Synovitis	43
Bursitis over patella	42
Cellulitis of the hand	28
Rheumatism from exposure	12
Bursitis or beat elbow	9

There was one case of compressed-air disease.

The statistics show that lead poisoning in painters has decreased from 370 cases in 1924 to 93 in 1927 (and to 50 in the first six months of 1928), and that painters have suffered from an interesting list of poisonous solvents and pigments other than lead, which for the four years 1924 to 1927 included:

	Fumes inhaled	Skin absorption or contact
Paint fumes	25	32
Benzol	5	1
Varnish and paint removers and thinners	2	9
Turpentine	6	10
Lacquer	3	8
Zinc	4	--
Distillate	--	6

### *North Dakota*

Commissioner S. S. McDonald, of the North Dakota Workmen's Compensation Bureau, reports under date of March 5, 1929, that while the law of that State covers occupational diseases proximately caused by the employment, there have been so few cases of occupational diseases that they have not been separated for statistical purposes. This part of the law went into effect July 1, 1925, and there have not been more than five or six cases reported since that date. Practically all of these were painters or men working with paint. The commissioner suggests that since North Dakota is not a manufacturing State but an agricultural one, very few occupations would



cause disease there. According to section 2 of the workmen's compensation act, the term "injury" includes, in addition to an injury by accident, any disease proximately caused by the employment.

According to the workmen's compensation act: "If the employer claims an exemption or forfeiture under this section [as to injuries], the burden of proof shall be upon him."

In the ninth annual report of the North Dakota Workmen's Compensation Bureau for the year ending June 30, 1928, there are reported among the dismissed claims, 39 diseases and there were 17 claims for poisonous substances, involving a loss of 243 days and a total award of \$1,087.17.

### *Minnesota*

The act compensating occupational diseases in Minnesota became effective June 1, 1921 (workmen's compensation law), and the same provisions hold for reporting and compensating occupational diseases as apply to other disabilities in this law. The schedule method is followed and 23 afflictions are specified, which, briefly, are: Anthrax, lead poisoning, mercury poisoning, phosphorous poisoning, arsenic poisoning, poisoning by wood alcohol, poisoning by nitro and amido derivatives of benzene (etc.), poisoning by carbon bisulphide, poisoning by nitrous fumes, poisoning by nickel carbonyl, dope poisoning (tetrachlormethane, etc.), poisoning by African boxwood, chrome ulceration, epitheliomatous cancer due to tar, pitch (etc.), glanders, compressed-air illness, ankylostomiasis, miner's nystagmus, beat hand, miner's beat knee, miner's beat elbow, inflammation of the synovial lining of the wrist joint and tendon sheaths, and cataract in glass workers; also, any other disease which is an accidental personal injury within the meaning of part 2 of the act.

For the year ending June 30, 1927, poisonous substances and occupational diseases occasioned a loss amounting to \$57,857, and for the year ending June 30, 1928, the figure was \$59,823.<sup>6</sup> Occupational diseases alone in 1927 caused a total loss amounting to \$30,209, and in 1928, \$24,610. In 1927 there were 135 occupational diseases compensated, and in 1928, 216 cases compensated. It is impossible to discern from the industrial commission's report just which of the scheduled causes produced the occupational diseases mentioned. In 1927 occupational diseases occasioned the loss of 10,073 days, and in 1928 of 16,472 days.

### *Wisconsin*

Information as to this State was obtained from Chairman Fred M. Wilcox of the Industrial Commission of Wisconsin.

Occupational diseases are reportable to the industrial commission. They are compensated under the blanket method and not by the schedule method. Mr. Wilcox says:

I am unalterably opposed to the schedule system of coverage which is in vogue in most of the States that provide coverage at all. The Wisconsin act is a very simple thing. At the end of the compensation law covering liability for industrial accidents (secs. 102.01 to 102.34 inclusive) we added in 1919 section 102.35 which reads as follows:

"The provisions of sections 102.01 to 102.34, both inclusive, are extended so as to include, in addition to accidental injuries, all other injuries, including occupational diseases, growing out of and incidental to the employment."

<sup>6</sup> Minnesota Industrial Commission. Fourth biennial report, 1927-1928. Minneapolis [1929?], pp. 50, 51.

My efforts since that time have been to have States appreciate that they can grant full coverage and still not burden industries. When industry knows that they have got to pay indemnity for diseases of occupation, they will take the pains to discover the hazards and when an employee becomes afflicted with any disease that grows out of his employment they will give him immediate medical attention and that will usually clear up the difficulty. The great damage from diseases of occupation comes because of neglect to take care of the conditions as we see them arise. They are neglected until they become serious, and oftentimes because of the delay not responsive to treatment.

In another letter dated September 10, 1928, addressed to Chairman O. F. McShane of the Industrial Commission of Utah, he says, along the same lines, as follows:

If one will check back into the history of such schedules, they will undoubtedly find that the principal reason for that plan of legislation was to make certain that liability did not attach for tuberculosis and pneumoconiosis. I believe such action indefensible because the sand-blasting, stone cutting, grinding, and polishing operations are actually producing these two types of disease and are, after all, the most serious of all industrial diseases.

No clearer type of industrial hazard is known and there is no surer result to employees who are exposed to this hazard without protection than tuberculosis and pneumoconiosis. Furthermore, there is no kind of industrial injury that has higher moral demand for compensation than the injuries which employees in these occupations are suffering. Employers can protect their men against this hazard if they will. And they will, when it costs them dearly to neglect the situation. The practical results of the operation of a schedule are not less discriminatory than would be a provision under compensation for scaffold accidents which paid benefits only for those injuries in which employees who fall light upon their feet and not for those cases where they land on their head.

In a blue print, prepared under Mr. Wilcox's orders, covering occupational disease cases compensated in Wisconsin from 1920 to 1926 and issued under date of April 1, 1928, the total number of occupational-disease cases reported for the respective years was as follows:

	Cases		Cases
1920.....	38	1925.....	282
1921.....	235	1926.....	340
1922.....	281		
1923.....	338	Total.....	1,813
1924.....	299		

In the Wisconsin Labor Statistics for October 5, 1928, we note that the total number of cases compensated for the year 1927 was 20,473. Of this number 397 are scheduled as occupational diseases, the causes being as follows: Poisonous substances, 170; irritant dusts and fibers, 75; micellaneous irritants, 43; germs (including 1 anthrax), 16; air compression, 27; extremes of humidity, 3; extremes of temperature, 17; excessive light, 4; inflammation of joints, tendons, and muscles, 23; and others not specified, 19.

For the year 1928, there were 395 cases, not yet distributed as to causative agents, but the indemnity benefits amounted to \$83,108 and the medical aid to \$15,070, or a total of \$98,178. The total amount of indemnity paid for the occupational diseases listed for the nine years, from 1920 to 1928 inclusive, amounted to \$478,415 and the total amount of medical aid to \$111,212 in addition.

### *Illinois*

An act passed by the legislature, effective July 1, 1923, to compensate occupational diseases in a small list of occupations was declared constitutional by the State supreme court. The amendment referred



to relates only to occupations involving the use or handling of certain chemicals and processes named therein. Mr. William M. Scanlon, chairman of the Illinois Industrial Commission writes:

Consequently the claims for compensation on account of disability from occupational diseases are very few. We have no statistics on this subject which would be of any value to you. There are also cases of disability from occupational diseases which are termed accidental injuries. For instance, an employee may be suffering from lead poisoning coming on gradually and then was suddenly overcome at a certain time and place. Such a disability could be called an accidental injury, although it is really an occupational disease.

Occupational diseases have been reported in Illinois since 1911, following the survey of occupational diseases which was made under the direction of Dr. Alice Hamilton in 1910, and special protective provisions for employees exposed to certain dangers were put in force July 1, 1911. The dangers referred to processes in which workers were exposed to certain compounds of lead, to Paris green, and to brass and zinc. At the present time these are the afflictions which are included in the compensation list.

According to the Illinois Health Messenger of the State department of health, June 1, 1929, reports of occupational diseases were received in the State department of health as follows: 1926, 244; 1927, 210; 1928, 86. The principal disease concerned is lead poisoning. The falling off in reports for the year 1928 may be due to either an actual improvement in condition or incomplete reports.

The Illinois State Department of Health created a bureau of industrial hygiene in 1927, the chief activity of which, we understand, has been transferred to Chicago and associated with the city department of health.

### *Ohio*

By a joint resolution of the two houses of the Ohio Legislature, a survey of industries as they affected the health of employees was begun May 15, 1913. I was given direction of this work and reported the result of this survey<sup>7</sup> in 1915. During the interim, the term "industrial health hazard" was first coined, we believe, by us in 1913. Also on May 1, 1913, the occupational disease reporting law became effective. At that time we adopted the so-called "standard form" devised by the American Association for Labor Legislation for reporting occupational diseases. We have used this form continuously since that date and have made but one modification, which consists in addition to the second column of the form of the following question: "What in your opinion caused this affliction?" This directs the physician's attention to the specific cause and has in six months' experience proven a very useful question for securing definite information as to the causative agents. We think, in fact, this phrase or a similar one should be added to the "standard form" wherever it is used.

During the course of the survey, the total reports of occupational diseases found by investigators and reported by physicians was 864 positive; i. e., specific or noncontroversial cases, in addition to 301 industrial tuberculosis cases and 211 tentative cases of occupational nature. Up to the date of June 30, 1920, the total bona fide cases

<sup>7</sup> Ohio State Board of Health. Industrial Health Hazards and Occupational Diseases in Ohio. Columbus, 1915, 434 pages, illustrated.



had reached 1,737, and by the end of June 30, 1925, 4,963 cases<sup>8</sup>—these within a period of 12 years and 2 months. By the end of December, 1928, the total reported had reached 8,292 positive cases.

A marked increase in the reporting of cases was noted following the passage of the compensation act for certain occupational diseases, which became effective August 4, 1921, and the average report of positive cases for the last three years has been about 100 per month. Since 1921 we have classified our reported occupational diseases as "compensable" or "noncompensable." The year of 1928 was a representative one, 1,118 compensable cases and 66 noncompensable being reported. During the same year there was a total of 229,223 industrial accidents and diseases, of which 1,108 were fatal and 27 caused permanent total disability. Of the 15 afflictions on our schedule, there was reported for dermatitis 894 cases; lead poisoning, 180; compressed-air illness, 16; benzol poisoning, 11; brass and zinc poisoning, 9; gasoline poisoning, etc., 3; carbon bisulphide poisoning, 1; and wood alcohol poisoning, 1; while there were no reports of anthrax or glanders, nor of poisonings by mercury, phosphorus, arsenic, and carbon dioxide.

Wherever the schedule method is used it is necessary to secure reports of noncompensable occupational diseases by appealing to the physicians of the State, in order that experience may be gained to submit to the legislature for the addition of other afflictions. We have been dividing our noncompensable diseases into two groups, the first of which is the agent group, and is made up entirely of poisons not on the compensation list. In the last three years we have had 19 different poisons named in this relation. The second group is composed of afflictions which have been due to various causes alleged to be occupational. These afflictions have been arranged alphabetically, from "arthritis" and "asthma" to "tularemia" and "varicose veins." They are the same afflictions I have classified under "diseases partly occupational," with the addition of "heat cramps," "heat stroke," and "heat exhaustion," which are usually specific occupational diseases (although the poisonous agent is not definitely known). In the last three years we have noted 21 different afflictions in this group. Our present legislature has added three more afflictions to our compensation list: Manganese poisoning, radium poisoning, and tenosynovitis and prepatellar bursitis.

I have not the figures immediately at hand covering the cases actually compensated by the industrial commission, but experiences which we have previously reported<sup>9</sup> show that about 95 per cent of those reported were actually compensated, and not over 7 per cent were controversial or questioned as to the justness of the claim. The latest report upon this subject, entitled "Recent Trends in Occupational Diseases in Ohio," by Dr. Byron E. Neiswander and the writer, was published in the Ohio State Medical Journal for January, 1929. This study showed that there continues to be a considerable increase both in number and variety of occupational diseases each year. While lead poisoning is still a most important source, the cases are becoming milder if not less in number. In fact, lead poisoning

<sup>8</sup> Journal of Industrial Hygiene, April, 1926, pp. 143-164. "Occupational diseases reported to the Ohio State Department of Health for the 5-year period ending June 30, 1925," by E. R. Hayhurst and D. J. Kindel.

<sup>9</sup> Journal of Industrial Hygiene, October, 1924, pp. 259-265. "Status of the occupational disease question in Ohio, based on official figures. Retrospect and prospect," by E. R. Hayhurst.

fell off only in one industry—automobile manufacturing. Decreases were noted, however, in benzol poisoning and in rubber dermatitis. When the last two and one-half years were compared with the findings of the previous five years, the average annual increase in reported compensable occupational diseases was 71 per cent, while that of reported noncompensable occupational diseases was 997 per cent.

We have been impressed with the increasing cooperation of the physicians in the State in reporting occupational diseases to the State director of health as specified in the reporting act. Of the approximately 8,000 physicians in the State, 1,032 have reported 2,932 occupational diseases in the 2½-year period ending December 31, 1928. Of these, one industrial physician reported 258 cases, another 147, another 98, and another 57, while 662 physicians reported one case each. Through an arrangement with the compensation division, we send blanks to all physicians who report cases for compensation and secure about half of our reports by follow-ups from that source. There is no fee for making such reports in Ohio. While most of our cases are reported by physicians connected with industrial establishments, these do not represent more than 10 per cent of the total number of physicians who report.

#### *New Jersey*

The schedule for compensable occupational diseases in New Jersey (Laws of 1911, amended 1928, ch. 95), lists the following: Anthrax, lead, mercury, arsenic, phosphorus, benzene and its homologues and all derivatives thereof, wood alcohol, and chrome poisoning, caisson disease, and mesothorium or radium necrosis. The reporting of these afflictions to the workmen's compensation bureau by physicians became compulsory March 11, 1924.

For the year ending June 30, 1925, there were reported a total of 240 occupational diseases, of which 164 were due to lead, and of these 97, including 12 fatal cases, were due to tetraethyl lead; 29 were due to dermatitis; 15 to anthrax; 13 to benzol and its derivatives; and the remainder scattered. For the year ending June 30, 1926, there was a total of 114 cases, with 56 due to lead; 13 to anthrax; 14 to dermatitis; 14 to benzol; 13 to mercury; and the remainder scattered. For the year ending June 30, 1927, there were 195 occupational diseases reported, of which 55 were due to lead, 49 to benzol, 27 to dermatitis, 7 to anthrax, 7 to arsenic, 4 to mercury, 5 to caisson diseases, and the rest scattered. For the year ending June 30, 1928, the number of occupational diseases had increased to 232 cases, of which 70 were due to lead, 70 to dermatitis, 60 to caisson disease, 18 to benzol, 6 to anthrax, 2 to mercury, 2 to cyanide, and 4 to anilin.

As described in the Industrial Bulletin (New Jersey) for December, 1928, Dr. Andrew F. McBride, former commissioner of labor, took a progressive step for the control of diseases of occupation by establishing an occupational disease clinic, which is under the direction of Dr. Henry H. Kessler, Mr. John Roach, deputy commissioner of labor, who have long been associated with occupational disease investigations in the State, and Martin Szamatolski, Ph. D., consulting chemist. A list of rules has also been issued outlining the responsibilities of employers of workmen in the dangerous trades (see Indus-



trial Bulletin for July, 1927, p. 15) which specifies (a) physically fit workmen; (b) warning workmen of dangers; (c) periodic physical examinations; (d) health appliances; (e) providing proper clothes and sanitary equipment; (f) expert medical attention; and (g) the reporting of all sickness due to occupation to the proper authorities. In the few months since the establishment of the occupational disease clinic the incidence of occupational diseases met has exceeded all expectations. For example, in one color plant, of 22 men exposed to lead dust, 18 showed definite signs of lead absorption, while 16 had definite symptoms of lead intoxication. Certain hat factories are still hotbeds of mercury poisoning, and in one plant over 30 per cent of the men were in typical shakes from chronic mercurial poisoning, while in about 10 per cent their signs were acute enough to warrant immediate cessation from work and intensive treatment. Benzol has been largely replaced by toluene in the artificial-leather industries, although some plants are still using benzol, so that in an investigation of 100 men about one dozen cases of subacute benzol poisoning have been found. Alcoholism was undoubtedly a contributory cause in the benzol cases.

### *New York*

According to a personal communication from E. B. Patton, director of the bureau of statistics and information, dated March 28, 1929, New York State has required the reporting of occupational diseases to the State department of labor, since September 1, 1911, but at first limited it to a list of six afflictions—lead, phosphorus, arsenic, and mercury poisoning, anthrax and compressed-air illness. In 1913, two others were added—brass and wood alcohol poisoning.

The division of industrial hygiene was created under a law effective March 28, 1913. In 1923, the present, entirely separate, bureau of industrial hygiene was created under the direction of Dr. Leland E. Cofer, with a staff of physicians, a chemist, engineer, inspectors, and others.

The workmen's compensation law became effective in New York State on July 1, 1914, but did not include occupational diseases, except under exceptional circumstances, until a broadening of the laws in 1920, when those on the schedule became compensable. The earlier laws respecting the compensation of poisonings had the phraseology, "engaged in any process involving the use of," which by chapter 754 of the Laws of 1928 was broadened to include compensation when due to "direct contact with" the several poisonous substances enumerated in the schedule.

The afflictions now compensated in New York include: Anthrax; lead, zinc, mercury, phosphorus, arsenic, wood alcohol, nitro, hydro, and amido derivatives of benzene, carbon bisulphide, nitrous fumes, nickel carbonyl, and dope poisoning; formaldehyde poisoning; chrome ulceration; epitheliomatous cancer; glanders; compressed-air illness; miner's diseases (including only cellulitis, bursitis, ankylostomiasis, tenosynovitis, and nystagmus); and cataract in glassworkers.

For the year ending June 30, 1926,<sup>10</sup> there were reported in all industries in New York State 342 cases due to poisonous substances,

<sup>10</sup> New York Department of Labor. Special Bulletin No. 152, August, 1927, pp. 139-140.



824 due to corrosive substances, and 271 specified as occupational diseases. The chief poisonous substances were: Poison ivy and other plants, 83 cases; dyes, 51; illuminating gas and coal gas, 35; and carbon monoxide and dioxide, 15. The chief corrosive substances were: Lime, 308 cases; acids, 237 cases; irritants (not corrosive), 121 cases; alkalies, 114 cases; and cement, 44 cases. The "occupational diseases" included 216 cases of lead poisoning, 33 of "cellulitis, etc.," 8 of anthrax, and 14 scattered cases. Radium poisoning when it occurs in hospitals and laboratories, has been added to the list by the 1929 legislature.

For the year ending June 30, 1928,<sup>11</sup> there were a total of 93,565 compensated accidents, of which 1,350 were due to harmful substances, 2,522 miscellaneous, and 1,115 indefinite, but there is no subdivision labeled occupational diseases. The amount of compensation for the harmful substances alone was \$515,438, and cases due to these substances have increased 32 per cent when compared with the year 1924.

The laxity in reporting occupational diseases in the State of New York on the part of the physicians is remarkable for a State where the standard reporting law exists. Dr. Robert S. McBirney, medical inspector of factories of New York, states:<sup>12</sup>

During the past 4 years less than 10 physicians have reported diseases, and not more than 5 hospitals have notified the department of labor, or the bureau of industrial hygiene which has supervision over this subject.

This condition should be contrasted with the reporting in Ohio where the same kind of law obtains and a similar report form is used.

### *Massachusetts*

The compensation law became effective in Massachusetts July 1, 1912, and was very early interpreted by the supreme court in the Johnson case (217 Mass. 338), as covering an occupational disease when said disease constitutes a personal injury arising out of and in the course of one's employment. Hence, there is no separate occupational disease law in Massachusetts. A communication from John P. Meade, director of the department of labor and industries, states that under the above decision a personal injury must arise both out of employment and in the course of employment; one of the conditions is not sufficient. This is a fruitful source of misunderstanding concerning the Massachusetts law in relation to compensation for diseases of occupation.

A most important recent decision of the supreme judicial court in the case of Patrick Sullivan *v.* Chester Granite Co. and the Massachusetts Bond & Insurance Co. has affirmed that an employee suffering from silicosis was incapacitated by reason of a personal injury and was to be compensated. (Opinion filed January 4, 1929.)

The following statistics are published in the Monthly Labor Review for October, 1928, and are taken from the annual report of the Department of Labor and Industries of Massachusetts for the year ending November 30, 1927, in which is a review of 247 cases of occupational

<sup>11</sup> New York Department of Labor. Industrial Bulletin, October, 1928, p. 393.

<sup>12</sup> Idem. Industrial Hygiene Bulletin, May 1929, p. 42.

diseases investigated. Of these, 25 were women, and 222 were men, 5 of the cases being fatal (1 woman and 4 men). The 247 cases were:

	Cases
Industrial dermatitis.....	77
Lead poisoning.....	47
Acid, oil, and fume poisoning.....	20
Chrome poisoning.....	18
Gas poisoning.....	16
Benzol poisoning.....	13
Industrial eczema.....	12
Tuberculosis.....	8
Anthrax.....	8
Cyanide poisoning.....	4
Dust in lungs.....	2
Other industrial poisoning.....	22
Total.....	247

An analysis of industrial dermatitis showed 19 cases in tanning, 14 in shoe manufacturing, and the rest scattered. A similar analysis is given for lead poisoning.

As to the experience of Massachusetts in 1928, the total number of tabulatable injuries for the period ending June 30, 1928, was 60,330. Of this number 956 were diseases of occupation. Among these, as given by the industrial accident department, are the following: Anthrax 15, lead poisoning 72, pneumoconiosis 8, gas poisoning 97, and ivy poisoning, 134. There were also a number of benzol cases. Follow-up inspection work is made in the industrial establishments with special reference to matters pertaining to health. In addition to the afflictions named these inspections have covered the following poisons: Carbon monoxide, chrome, cyanide, and benzol; also, silicosis. The department has prepared a number of rules, regulations, and suggestions for the prevention of various occupational diseases, and special attention is given in the inspections to conditions promoting industrial tuberculosis.

### *Connecticut*

After confusion as to the meaning of the word "accident" in the Connecticut statute and decisions by the Supreme Court, in 1927 an extensive revision in the compensation law was made to include occupational diseases, defining the same as "a disease peculiar to the occupation in which the employee was engaged and due to causes in excess of the ordinary hazards of employment as such." There is no differentiation in the records kept by the workmen's compensation commission between occupational diseases and injuries in the ordinary sense of the word.

Physicians have been required to report cases of occupational diseases to the Connecticut Department of Health since July 1, 1923 (Acts of 1923, ch. 93, sec. 2416). In 1927 the legislature provided an appropriation (Acts of 1927, ch. 321, sec. 1) to study and provide advice in regard to conditions suspected of causing occupational diseases. As a result of this appropriation, the division of occupational diseases in the State department of health was placed upon a full-time basis in January, 1928, and Dr. Albert S. Gray was appointed as its chief. Much has had to be done in giving publicity to this reporting law, and as a result reports are constantly increasing.

Laboratory facilities have recently been established. Gratifying results have already been secured.

The occupational diseases reported in 1923 were as follows: Pneumoconiosis, 31 cases; dermatitis and eczema, 25; lead poisoning, 20; benzol poisoning, 3; conjunctivitis, 3; mercury poisoning, 3; metallic poisoning, 2; anilin poisoning, 1; intestinal ulcer, 1; bronchitis and laryngitis caused by carbureted sulphur, 1; total, 90. In 1924 the diseases reported were: Mercury poisoning, 48 cases; dermatitis and eczema, 37; lead poisoning, 29; and a few scattered; total, 119. In 1925 there were reported: Dermatitis and eczema, 35 cases; lead poisoning, 30; mercury poisoning, 9; and the remainder scattered; total, 81.

For the fiscal years 1925-26 and 1926-27 there were reported: Dermatitis and eczema, 162 cases; conjunctivitis, 14; only 2 of lead poisoning; 1 of mercury poisoning; 2 of anthrax; 2 of tuberculosis, with one or two others; total, 186.<sup>13</sup> For 1927-28 there were reported 95 cases of dermatitis and eczema; 25 of mercury poisoning; 19 of conjunctivitis; 11 due to allergy from vegetable dust; and only 6 due to lead poisoning; also 2 of silicosis, and one or two others scattered; total, 164 cases. In the six months ending December, 1928, there were reported a total of 204 cases, or more than for any previous annual period.

Connecticut pays a fee of \$1 to the physician for each case of an occupational disease reported according to law.

### *Federal Laws*

The United States Government enacted a compensation law effective September 7, 1916, applying to Federal employees, which was made to include occupational diseases as injuries, first by the commission, and later by Congress, June 5, 1924. Separate acts applying to longshoremen and harbor workers and to employees of the District of Columbia consider occupational diseases as injuries. In the act relating to Federal employees there is a 3-day waiting period. During the calendar year 1927 for the Federal employees alone there were reported 20,547 injuries. Figures are not yet available for the other groups, due to the recentness of the respective inclusions. Among the injuries from September 7, 1916, to the end of 1926 there were 353 cases which can probably be considered as occupational diseases. Of these, 120 were due to poisoning, 96 to corrosive substances, 50 to overstrain or strain of unnatural position, 37 to heat, 18 to cold, 22 to infectious diseases, and the others (10) scattered.<sup>14</sup>

During the year ending June 30, 1928,<sup>15</sup> corrosive substances caused 98 injuries, poisonous substances 53, and certain miscellaneous agents caused what might be termed "occupational diseases." The corrosive agents ranged from ammonia to sulphuric acid. The poisonous substances included lead poisoning, 15 cases; carbon monoxide, 5; impure water, 4; and sulphur dioxide, 1. In the miscellaneous group were 10 cases of insect bite, 1 of snake bite, 31 of unnatural position, 6 of cold, 15 of heat, and 2 of unspecified disease.

<sup>13</sup> Connecticut Department of Health. Forty-second report, for the year ending June 30, 1927. Hartford, 1927, p. 39.

<sup>14</sup> United States Employees' Compensation Commission. Eleventh annual report, July 1, 1926, to June 30, 1927. Washington, 1927, p. 54.

<sup>15</sup> *Idem.*, Twelfth annual report, July 30, 1927, to June 30, 1928. Washington, 1928, pp. 80-82.



*Territories and Insular Possessions*

*Hawaii.*—A letter from Mr. MacIntyre, chairman of the industrial accident board, Honolulu, April 9, 1929, states that:

Compensation for occupational diseases was not originally provided in our act as passed in July, 1915, but the act was amended in 1917 to include occupational diseases. This amendment took effect May 2, 1917.

The workmen's compensation law of the Territory of Hawaii (Rev. Laws 1925, ch. 209, sec. 3604) reads:

This chapter shall apply to any and all industrial employment, as hereinafter defined. If a workman receives personal injury by accident arising out of and in the course of such employment, or by disease proximately caused by such employment, or resulting from the nature of such employment, his employer or the insurance carrier shall pay compensation in the amounts and to the person or persons hereinafter specified.

The following occupational diseases have been reported: 1917—pneumonia 1, tuberculosis, 1; 1920—trachoma (associated with cement dust) 11; 1921—pneumonia 1, lead poisoning 1; 1922—conjunctivitis 1; 1923—pneumonia 1; 1924—tuberculosis following injury to chest 1; 1926—pneumonia 1; 1927—pneumonia 1, endocarditis 1, dermatitis 1, trachoma 1; 1928—rheumatism 1, influenza 1.

The aggregate compensation and benefits paid in the above-enumerated occupational diseases for eight cases allowed, none of which were fatal, totaled \$2,750.83.

Eight cases of hernia associated with physical effort have been adjusted, six of them aggregating compensation amounting to \$1,478.53.

*Porto Rico.*—The act applies to disability from any of 15 occupational diseases scheduled—the same diseases as those scheduled for Ohio. No statistics have come to hand.

*Philippine Islands.*—Director Hermenegildo Cruz, of the Philippine Bureau of Labor, Manila, states in a letter of April 22, 1929, that the workmen's compensation act No. 3428, together with the rules and forms for its due application, took effect June 11, 1928. Section 2 of this act reads as follows:

*Grounds for compensation.*—When any employee receives a personal injury from any accident due to and in the pursuance of the employment, or contracts any illness directly caused by such employment or the result of the nature of such employment, his employer shall pay compensation in the sums and to the persons hereinafter specified.

A 139-page bulletin of rules for use in connection with the compensation act, including occupational diseases, printed in both English and Spanish, forms a very compact exposition. Thus far (no date given), the total aggregate spent under the compensation act since July 11, 1928, has amounted to \$42,290.93. There were 906 accident cases among Filipinos, 7 among Chinese, 5 among Japanese, 1 of an American, and 1 of a German. There were 68 deaths, 18 permanent partial disabilities, and 834 temporary disabilities, amounting to 433,692 total weighted days lost. Occupational diseases are not specified, but one case was reported of "poisonous and corrosive substances and occupational diseases."

*States Having Indefinite Coverage*

*Kentucky.*—Occupational diseases are excluded, except such cases as may be natural and direct results of traumatic injuries by accident, or due to inhalation of mine gas or smoke, or to inhalation of any kind of gas.

*Maryland.*—Occupational diseases are excluded, except such cases as result naturally from accidental injuries. But a disease of gradual contraction has been held to be an "accidental injury."

*Ontario*

From the Workmen's Compensation Act with Amendments, Regulations, etc., to 1927, we note that the schedule method is used for compensating occupational diseases, and in a letter from Dr. J. G. Cunningham, director of the division of industrial hygiene, Department of Health, Toronto, Canada, we are informed that the act became effective in 1915. It first covered anthrax; lead, mercury, phosphorus, and arsenic, poisoning; and ankylostomiasis. In the last three or four years there have been added: Benzol poisoning, compressed-air illness, and the following four, all related: Miner's phthisis and silicosis, and stoneworker's or grinder's phthisis and pneumoconiosis. Since there is no occupational disease reporting law in Ontario, there is more than the usual difficulty in compiling a list of such diseases.

Dr. J. G. Cunningham, in a communication of April 16, 1929, sends me a list of occupational diseases with which his office has come in contact during the year 1928. In the absence of a reporting law these represent only cases which they have discovered in the course of examinations conducted in trades or which have been brought to their attention by physicians, accident associations, etc. They are: Arsenic poisoning, 36; caisson disease (practically all "bends"), 77; silicosis: (a) granite cutters, 44; (b) grinders, 3; (c) molders, 2; and (d) miners, 91 (most of these represent an accumulation of cases where examinations have been made); lead poisoning, 85, including many with no disability but considerable stippling; dermatitis due to dye, 10, and to sugar, 5; chrome poisoning, 3; and cyanide poisoning, 2. According to Dr. Edgar L. Collis in a paper just published,<sup>16</sup> silicosis is compensated as follows in Ontario: ante-primary case, \$500; primary case, \$1,000; secondary case, total disability.

*Other Canadian Provinces*

There are no laws requiring the reporting of occupational diseases to the provincial boards of health or otherwise. Doctor Cunningham, of Ontario, has prepared (1926) a Rapid Reference Manual on Occupational Diseases, similar to the one issued by the New York State Department of Labor, in which the following Provinces are shown to compensate occupational diseases, following the English system of scheduling: Alberta, British Columbia, Manitoba, New Brunswick, and Nova Scotia. They all compensate anthrax, anky-

<sup>16</sup> Reports of the fourth meeting of the International Permanent Committee on Occupational Diseases, League of Nations, Lyon, France, Apr. 3-6, 1929.

lostomiasis, lead, mercury, phosphorus, and arsenic poisoning. In some of the Provinces named there are also compensated: Sulphur poisoning, ammonia poisoning, carbon bisulphide poisoning, carbonic acid poisoning, glanders, miner's phthisis, stoneworker's or grinder's phthisis, infection by handling sugar, cellulitis (hand and knee), bursitis over elbow, and frost-bite sustained in the course of employment. Government employees are subject to the compensation arrangements which obtain in the Provinces in which they work.

No compensation for occupational diseases is allowed in Quebec. Saskatchewan and Prince Edward Island have no compensation laws. The industrial diseases compensated in the various Provinces named vary considerably, New Brunswick having the largest list.

### Diseases Partly Occupational

THESE AFFLICTIONS are very common and, of course, make up the vast majority of cases which are of interest to the physician, to the insurance company, and to all. They may be started by an industrial health hazard, or aggravated by it, but they progress of themselves outside of industry. Oftentimes the same hazards or strains occur outside of industry and may be found, perhaps, in the housing, the recreation, or, indeed, the geographical location. These latter industry should never be expected to control, whereas it is possible, we believe, to eliminate practically every industrial cause.

From this class of diseases, partly occupational, come especially the chronic degenerative diseases which particularly afflict America and crowd hospitals and dispensaries with persons who are over 40 years of age, and in almost the same proportion cause us to find on the job a very vast majority who are under 40 years of age.

Dublin points out that tuberculosis may be ten times as prevalent in certain occupations as in the general population and the Registrar General's report for last year states that the tuberculosis death rate in Cornish copper and tin miners is forty times that of country bailiffs and Anglican clergymen. Without doubt, diseases partly occupational may therefore assume a position of enormous importance in the economy of life and death of the employed.

While we classified specific occupational diseases by cause, the present group may advisedly be classified according to the pathological conditions present, and the industrial compensation adjusted, as in Massachusetts and California, on an individual basis after a hearing before a proper board to determine the occupation's share of the disability.

#### *Classification of diseases partly occupational*

- I. Diseases of the respiratory system: Coryza; rhinitis; pharyngitis; otitis media; laryngitis; acute and chronic bronchitis; asthma; emphysema; cirrhosis of the lungs; pleurisy; tuberculosis; pneumonia; lung abscess.
- II. Diseases of the circulatory system: Hypertension; hypotension; hypertrophy of the heart; arteriosclerosis; aneurysm; varicose veins; anemia; hemorrhages; etc.
- III. Diseases of the urogenital system: Bright's disease; stone; bladder tumors; sterility; priapism; etc.
- IV. Diseases of the alimentary system: Gastritis; ulcer; enteritis; appendicitis; hemorrhoids; gallstones; cancer; etc.
- V. Diseases of the skin: Pruritus; eczema; ulcers; furunculosis; chronic fissures; epithelioma; etc.



- VI. Diseases of the nerves and muscles: Paralysis, spasm (tic); tremors; cramp; pain; neuroses; neuritis; neuralgia; sciatica; muscular atrophy; insomnia; headache; neurasthenia; hysteria; psychoses; etc.
- VII. Diseases of the eye and ear: Myopia; conjunctivitis; retinitis; optic neuritis; deafness; etc.
- VIII. Diseases of the bones: Necrosis of the jaw, nasal septum; rheumatism; arthropathies.
- IX. Endocrinal system: Thyrotoxicosis.
- X. Diseases of nutrition: Emaciation; obesity; gout; acidosis; diabetes; cancer; etc.

#### Occupational Health Complaints

OCCUPATIONAL HEALTH complaints, which are really not yet diseases, are almost universal. These represent strains—physiological strains in which normal toleration is strained to the utmost, indeed, over into the field of true disease. Examples are: Headache; dyspepsia, constipation, and sluggishness from inactivity and sedentary work; aches, pains, and numbness from the too strenuous use of hands, or arms, back, or limbs; eczema; colds, cough, “nervous weakness,” etc.

#### Nonconformities Advanced by Occupation

THERE ARE MANY afflictions, usually of stature or habit, which are promoted by the various trades, but which produce no definite disease or even health complaints. There is a tailor's stoop, the waiter's flatfoot, etc., in addition to numerous other postural defects. Often one sees the worker wasting energy with a constant nodding of the head or using various auxiliary motions, all of which waste energy. While none of these probably ever produce disability, so that they become compensation matters, they do not conform to the normal and therefore are classed as minor afflictions termed “nonconformities.”

OCCUPATIONAL diseases first came to my notice 20 years ago this coming December when I investigated five cases of arsenic poisoning discovered through one girl who had entered Cook County Hospital with a provisional diagnosis of chronic appendicitis. At the same time Dr. W. Gilman Thompson of New York City, Dr. Frederick L. Hoffman of the Prudential Insurance Co., Dr. George M. Price of New York City, Dr. C. T. Graham-Rogers of the New York Department of Labor, Dr. William H. Hanson of the Massachusetts Department of Health, Dr. David L. Edsall, who had reported heat cramps in workers in Philadelphia, and particularly Dr. George M. Kober of Washington, D. C., were practically the only ones in the country who were studying and reporting occupational diseases in American industries. Compensation for accidents did not become official until 1911, and that for occupational diseases naturally followed later.

To-day we see from what has been said that interest in occupational diseases is nation-wide, if not reported and compensated in all of the States, Territories, Possessions, and Provinces. In short, their existence has been established and their unusual prevalence is being gradually appreciated. Aggregate sickness among workers is charged for the hold-up in the decline of tuberculosis, with decreasing the average span of life of the industrial worker about eight years, of being twenty times more prevalent than accident injury, and with causing seven times as many days of disability as injuries. Mere mention of these now established facts should conjure up at once the economics involved.

### Effects

REGARDING the effects of ill health upon efficiency, many statistics are available, but I will mention simply one parallel: 90 per cent efficiency in a group of workers means the employment of 10 persons out of each 100, who are doing nothing.

The effects of afflictions on production may not materially disturb a given plant, simply because there is a surplus supply of labor, but economists claim that the replacement of even common labor costs about \$25 per person when everything is considered.

The difference in the effect on life expectancy of deciding to stay upon the farm or to go to work in a modern industry is approximately eight years in favor of the farm. The statesman knows the effects upon national vitality. Lloyd George was especially sensitive of this condition in his remarks about Great Britain's being composed of a lot of Grade C men so far as soldier capabilities were concerned. The Boer War in South Africa opened the eyes of the British to the situation even before that. The findings of our own army draft are often cited as evidence of the imperfect state of our own national vitality, but sickness surveys, dispensaries, and clinics furnish the best evidence available of the vitality of the industrial population.

### Preventability

IT IS ESTIMATED that about 40 per cent of the deaths of occupied persons could be prevented, that is, they fall among the classes of afflictions such as tuberculosis, pneumonia, and premature chronic degenerative diseases which are considered as preventable. About 60 per cent of the disablements are likewise considered preventable on a similar basis.

The financial aspects of industrial disability form a playground for statisticians and economists. Rankin, in the April, 1929, issue of the *American Journal of Public Health*, estimates the annual loss to the people of the United States resulting from decreased wage-earning capacity imposed by disease as \$2,000,000,000; that premature deaths amount to the equivalent of \$6,000,000,000; and medical services to \$2,500,000,000; or a total of \$10,000,000,000 a year. The total annual income of the United States is about \$90,000,000,000; hence the loss is something over 10 per cent of the income. Doctor Collis, in 1924, estimated the total British bill which medical science could save annually in Great Britain as £140,000,000 and Doctor Dearden placed it at \$700,000,000 at about the same time.

### Prevention

1. PRINCIPLE I: If it is hazardous to human lives to produce an article of human usefulness, then the cost of production should include the cost of the conservation of health.

PRINCIPLE II: A proper place to work, and safe methods of working, and some knowledge of the dangers to health and life are prerequisites to conducting any business, or to working, no matter whether one man or a thousand are concerned, and whether the individual is an employer or an employee.



PRINCIPLE III: The health of the individual is an affair of the State, since his dependency, willful or otherwise, becomes a burden upon the State, directly or indirectly.

2. If we reexamine the classifications suggested for occupational diseases it is at once apparent that the place to lay stress upon health in industry is upon occupational health complaints. Attention to trivial health complaints as they are encountered in everyday work life would theoretically ward off specific occupational diseases and catch partially occupational diseases in their incipency. It would also direct attention early to the presence of health hazards and to the medical control of those who are beginning to fail.

3. Periodical physical examinations by physicians should be insisted upon by health and labor departments wherever occupational diseases of a serious nature may or do occur.

4. Plant sanitary examinations should be made in a methodical and all-inclusive manner, else even the experienced medical inspector will overlook important features. The writer has devised a detailed "health hazards" card, 5 by 8 inches, adapted to investigating practically any work or health complaint, and covering all known health hazards. It is reproduced on pages 1068-1069 of Kober and Hayhurst's *Industrial Health*.<sup>17</sup>

5. All measurements of progress are based upon statistics, and the first essential in getting statistics is the adoption of a uniform nomenclature and standard recording forms. More will be said about this in discussing the responsibility of the health department. I would like to point out at this place that Dr. Wade Wright's committee upon industrial morbidity statistics of the section on industrial hygiene of the American Public Health Association has prepared and published a standard nomenclature for the afflictions of workers.<sup>18</sup>

6. Great attention should be given to drawing up specific regulations for the guidance of employers wherever serious health hazards exist. The English are very far ahead of us in this. Horan has pointed out that in the case of the *United States v. L. Cohen Grocery Co.*, 255 U. S. 81, "no subject shall be held to answer for any crime or offense until the same is fully and plainly, substantially and formally, described to him." (See the Declaration of Rights of the Constitution of the United States.)

7. The impracticability of attempting to include specific regulations in statutes has long been apparent, and I think they should be repealed wherever they exist. We see legislatures now delegating the authority for framing rules and regulations to both health and industrial boards. This permits set-ups to suit the varieties of problems met and the constantly changing methods. The boards in turn appoint "get-together committees" of employers, employees, and experts, who draft specific rules and regulations for their respective industries. As guides, the committees have but to turn to the many rules and regulations which have been published abroad and in some of our leading industrial States. The New York Industrial Commission began this procedure in its Bulletin No. 76, entitled "European Reg-

<sup>17</sup> Anyone interested may receive a sample of this inquiry card by addressing the Ohio State Department of Health, Columbus.

<sup>18</sup> *American Journal of Public Health*, January, 1925, pp. 31-34.



ulations for the Prevention of Occupational Diseases." We now have the New York Labor Code, issued, I think, annually, which may be taken as a guide.

8. Compensation for occupational diseases on the same basis as accident injuries is theoretically a powerful weapon for their prevention, but the tracing back of each case to determine and remove the causal hazard is the essential thing. Indeed, where the medical authority, with either a labor department or a health department, finds any of the suggested four groups of occupational diseases to exist, the jurisdiction of the one or the other or both departments should be invoked to stop the oncome of more cases or the development of sequelæ. My observation is that government is often too much engaged with compensation to give proper thought to prevention. To make compensation really effective in controlling these diseases, the employers' premiums should vary with the industrial experiences. In Ohio for the past three years we have had a flat rate of 1 cent per \$100 pay roll, so that each employer pays the same premium for occupational diseases and there is no incentive to reduce them. In fact many employers are paying for the occupational diseases of others, and have compensation for their own ignored, because the afflictions which they have are not on the schedule.

9. Much study and many intensive investigations must yet be made in this field. Hence, observations collected and published by industrial physicians and medical departments, as well as those of research workers, laboratories, statisticians, and sociologists, become of paramount importance.

10. As to the responsibility of the health department, preventable sickness, I take it, is an affair of this department, and it is regrettable that the appraisal form for health work of the American Public Health Association allows no credit whatever for a health department's work in industrial hygiene and occupational diseases in the 1,000 point score. In short, the 8 to 12 hours a day of workers' lives in industrial pursuits which result in abbreviating their span of life by several years, according to Dublin's estimates, are not worth considering in a standard health program.

In contrast to this situation in America, Dr. R. King Brown, medical officer of health of the Borough of Bermondsey, a populous district of London, S. E., reports for the activities of his department during the year 1927, 630 inspections of factories and workshops with remedial orders in 413 workshops on the registry, and the reference of various matters to the inspector of factories which came under the latter's jurisdiction.

✓ The steps for the health department, therefore, should be:

(a) An occupational disease reporting law (or regulation) binding upon all physicians to report all occupational diseases to the State, insular, or provincial director of health upon proper forms distributed by the health departments, and the provision that the quarantine regulations of the department may be extended to the offensive or health hazardous pursuit at the discretion of the director of health (the same as for other notifiable diseases) and maintained until the conditions are relieved. The so-called "standard reporting law" for occupational diseases requires that a copy of the report of each occupational disease shall be sent at once to the State department of

labor, or equivalent authority, to enforce its factory hygiene and welfare regulations.

(b) The health department should create an office, bureau, or division of occupational diseases (rather than one of "industrial hygiene") to supervise reports, investigate and verify their accuracy, establish quarantine, notify the State factory inspector, and assume such other duties as are pertinent to the prevention of more occupational diseases from the same source. Furthermore, this bureau may and should be constantly engaged in investigating diseases of workers which might be occupational in nature and reporting its findings to proper authorities and the industries concerned.

(c) Where substantial local health departments exist, they should be notified by the State, insular, or provincial health department of all occupational diseases occurring within their jurisdiction in order not only that they may exercise their powers in enforcing State and local regulations regarding notifiable diseases, but that they may know more thoroughly the true state of health within their jurisdictions.

(d) In those States where departments of labor have set up bureaus of industrial hygiene or occupational disease clinics, the health department should still assume the same responsibilities as before, remembering that the knowledge and incidence of preventable disease constitutes its jurisdiction. At the same time it should welcome the establishment of industrial hygiene bureaus in labor or similar departments, especially when they are staffed by trained men and are vested with authority to supervise the hygiene and sanitation of plants and work processes. Here close cooperation between the two offices will be necessary and most advisable, but the respective fields seem to me distinct enough to preclude overlapping authority—rather, one authority supports the other in protecting the health and bettering the chance for longevity of industrial workers.

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### Labor Movement in Brazil

By MOISÉS POBLETE TRONCOSO

IN HIS latest message, the President of Brazil spoke of the great economic development of the country, of the possibility of intensifying production by means of colonization, and of the increase in industrial output, but no allusion was made to the social problem. A more or less constant agitation now exists among the working classes of Brazil. In 1927, when a communist group created a violent disturbance, a law was passed authorizing the Government to put an end, without legal procedure and with the aid of the police, to all organizations which are considered dangerous to the social order. This law, the scope of which is very broad, permits the Government to exercise absolute control over the labor movement. But in spite of this, a great strike of street railway workers took place in Rio de Janeiro followed by violent demonstrations which resulted in the death of several workers.

The social legislation of Brazil may be said to have started with the law of January 6, 1903, covering agricultural unions (*syndicats*).



By this law agricultural workers and those in rural industries were given the right to organize to study and to defend their interests. Such organizations are exempt from all restrictions, the only obligation being that they file two copies of the constitution and by-laws, together with a list of the members in the respective districts. These lists of members as well as the by-laws must be filed each year if any changes have been made. Members have the right to resign from a union whenever they wish.

On January 5, 1904, a law was enacted for the protection of rural workers' pay. This law establishes the right of agricultural workers to wages paid even from the product of the crop, without preference being given to any other debt except such as may be guaranteed by mortgage or other agricultural security.

A law passed in January, 1907, dealt with the organization of trade-unions generally and of cooperative unions in particular. This law authorizes the formation of unions of industrial workers, which had not been contemplated in the earlier law on agricultural unions. It differs from the earlier law in that it permits the federation of unions without regard to geographical boundaries and recognizes the federation as a legal entity. The regulations governing the organization of these unions are much the same as those for the agricultural unions.

The law provides that unions should be so organized as to establish harmony between employers and employees and to facilitate the formation of permanent bodies for arbitration and conciliation, with the purpose of putting an end to the conflicts which arise between capital and labor.

The second part of the law will have the effect of encouraging the development of the cooperative societies which have been established in Brazil during recent years. The national congress of cooperation, held in Brazil in 1927, has given an account of this. Brazil has about 500 producers' and consumers' cooperative societies.

#### Laws Relating to Women and Children

MINORS HAVE BEEN the object of special legislation in Brazil. The law of December, 1926, which established the code for minors, carries special provisions covering the work of children. Employment of children under the age of 12 is forbidden in all parts of the Republic, and the employment of children more than 12 and under 14 years of age who have not met the compulsory education requirements (completion of primary school course) is prohibited. Minors under the age of 14 may not be employed as apprentices in building, manufacturing, and mining. The effect of these various provisions is that work by children between 12 and 14 years of age is authorized only in agriculture. The work of children under 18 is also prohibited when it is considered dangerous to their health, life, or morals. An important provision of this law is one which requires presentation of a certificate of physical fitness for admittance of all children under 18 to any kind of work. It is also provided that the work of children under 18 may not exceed six hours a day, and the night work of minors under 18 is forbidden. Male children under 16 and female children under 18 may not be employed in theaters, and in order to safeguard



the morals of minors the law prohibits their employment in cafés, bars, and cabarets until they become of age, and prohibits employment in the street or in public places of any child under 14 and of unmarried girls under 18 years old. Severe penalties are fixed for violations of the law by guardians or employers.

Work by women has not been the subject of special legislation. The only regulation affecting the employment of women is the rule of the department of public health of October 18, 1924, that a pregnant woman has the right to 30 days' rest before and after childbirth. The same regulation authorizes nursing mothers, whether clerks or factory workers, to take the time necessary for such purpose and makes compulsory the establishment of crèches or nurseries where the mothers may leave their children during working hours.

### Industrial Accidents

ONE OF THE most important laws of Brazil is the act of January 15, 1919, which regulates obligations resulting from accidents incident to employment and at the same time establishes compensation for occupational diseases. Compensation is paid to workers or their families in case of accident or disease, except in cases of force majeure or of fraud by the victim or by others. The law therefore does not establish absolutely the principle of complete occupational risk. The orders under this law do not differ substantially from those in other Latin-American countries.

### Holidays and Hours of Work

AN ANNUAL VACATION with pay for all salaried workers and wage earners in commercial and industrial concerns and banks was established by the law of December 24, 1925, which provides for 15 days' leave with pay for workers in such establishments. A later decree provided that the National Labor Council should carry out the terms of the law. Commercial houses in the Federal District may be kept open for 12 hours, 6 days a week, according to a decree issued in 1911.

A decree of February 2, 1924, prohibits night work in bakeries within the Federal District between the hours of 8 p. m. and 6 a. m.

### Domestic Employment

THE DECREE OF July 30, 1923, which regulates domestic employment, is of interest. Although it applies exclusively to the Federal District, it is the first law of a general kind, effective in South America, which deals with the employment of domestics. The law specifically covers cooks, cooks' assistants, personal servants, laundresses, gardeners, porters, nurses, seamstresses, and companions, and, in a general way, all those who are similarly engaged for pay in hotels, restaurants, boarding houses, bars, clinics, and private houses. This decree provides, among other things, for a book of identification for the domestic employee in which all personal details and conditions of the labor contract are entered. The law sets forth the causes for which the contract may be terminated, and conditions of termination for employers and employees, as well as the penalties for violation of the terms of the contract.

### National Council of Labor

A NATIONAL COUNCIL OF LABOR was created by the presidential decree of April 30, 1923. This council, which studies working conditions in industries, is composed of 12 members appointed by the President of the Republic: 2 workers, 2 employers, 2 high officials of the Ministry of Agriculture, Industry, and Commerce, and 6 persons of recognized authority on questions of labor. A president, a vice president, and a general secretary are elected annually. The council has the functions of a department of labor and is required to provide information on social problems, to make inquiries, and to see that the law relating to the wages of rural workers is carried out, for which purpose it encourages the organization of national unions and cooperative societies.

The powers of the National Labor Council were extended by a decree issued in January, 1928. As a result it becomes in reality a consulting organization in social matters, which proposes regulations and furnishes information on given questions when demanded by the Government; carries out or causes to be carried out the legal decisions regarding the retirement funds and pensions of railroad employees and dock workers established by the law of December 20, 1926; and serves as arbitrator in labor conflicts on request of the interested parties.

Because the principal activities of the country are agricultural and a great number of difficulties arise in enforcing labor contracts, a rural court was created in the State of Sao Paulo by the law of October 10, 1922. This court is composed of a judge and two members, one designated by agricultural employers and the other by employees. The tribunal has been very successful since its foundation and has accomplished much toward avoiding an increase in the difficulties which arise in carrying out labor contracts in agriculture.

### Housing of Workers

THE PROBLEM OF housing workers in Brazil was dealt with in the decree of May 20, 1921, which regulates the law of January 18, 1911, and that of December 11, 1920. The law grants a number of privileges to companies constructing houses for workers, such as exemption from taxation, the grant of free Government lands, expropriation in order to build workers' houses, discounts in railway rates for persons living in workingmen's dwellings in the neighborhood of cities, and finally loans on mortgage guaranties. The law requires builders to sell houses to the respective tenants at a price equivalent to the cost of materials plus the construction costs with a maximum of 10 per cent interest.

### Industrial Hygiene and Factory Inspection

MATTERS OF INDUSTRIAL hygiene were covered by a regulation of December 31, 1923, by the department of public health. This law was enacted as a complement to that of January 6, 1923, by which the department was created. The decree contains a special provision intended to cover inspection of industrial and commercial hygienic conditions in the Federal District.



It is the duty of the factory inspection service to authorize the opening of new industrial establishments and the transfer of industrial establishments and offices to other localities; to visit factories and offices, ordering changes which may be necessary to eliminate existing hazards; to examine workmen in factories and offices and to check their health records; to isolate all workmen affected by infectious disease and to analyze in the various industries the raw materials used which might be injurious to the health of laborers; to order the adoption of methods by which the health of workers may be protected in their work; and to impose fines to assure the execution of these decisions.

#### Employment of Artists

THE DECREE OF September 10, 1924, provides that artists and other persons engaged in theaters and public performances must fulfill the engagements which they have accepted, either orally or in writing, except in the event of illness or of death of either wife, parent, or child. This ruling applies to members of orchestras as well. It is further provided that directors of companies shall pay artists' salaries promptly, and shall not dismiss them without justification and shall not offend them either by acts or words. The law prohibits the employment of children under 16 in acrobatic companies and plays, and prescribes the conditions under which those more than 16 and under 21 years of age may work.

#### Pensions and Social Insurance

A SERIES OF laws and orders relative to pensions and social insurance in Brazil is worthy of special mention. The law of January 21, 1923, under which every railroad in the country created a pension system for its employees should be mentioned first.

On December 20, 1926, an amendment to the law was passed under which a retirement and pension fund for dock workers was established. A decree issued December 11, 1927, fixed the regulations governing the use of funds for retirement of railroad employees and made it compulsory for all railroad companies, State, municipal, or private, to organize pension and retirement funds for salaried workers and wage earners. Doctors and employees of the fund, employees of cooperatives, railroad workers, teachers in schools maintained by the railroads, and children of railroad workers are entitled to benefits under this law.

The retirement funds are maintained by a monthly payment by the employees equal to 3 per cent of the salaries, deducted by the railroad companies; by an annual contribution from the railroad companies equal to 1½ per cent of the gross receipts; and by a sum derived from an increase of 1½ per cent in railway rates. The benefits to which members of the fund are entitled include medical care for themselves and their families in case of sickness, and medicines at reduced prices; retirement on pension after 50 years of age and 30 years of employment; and benefit to the heirs in case of death. The pension is calculated on the wages received during the last five years of employment. In case of invalidity, retirement may be granted after 10 years of service if a medical examination made by a physician



appointed by the fund shows there is physical or mental incapacity for work.

In case of accident to an employee which results in total permanent incapacity for work, he is entitled to retirement without regard to his length of service. If the accident causes temporary incapacity, an employee is entitled to the amount established by the workmen's compensation law.

The fund is managed by a council composed of 5 members, including a director general appointed by the enterprise, 2 members chosen by the management, and 2 by the members of the fund. Their decisions are reviewed by the National Labor Council. The companies may organize separate funds under the supervision of the National Labor Council.

A decree of October 8, 1927, regulating the management of retirement and pension funds of dock workers, specifies that all undertakings, whether Federal, municipal, or private, which carry on work in the ports of the country are required to organize such funds for their personnel.

The financial basis of the funds is practically the same as that of railroad funds.

#### Proposed Social Legislation

THE TENDENCY TOWARD coordination of labor legislation which has manifested itself in several countries of Latin America and especially in Argentina, Uruguay, Colombia, Panama, and Ecuador is also appearing in Brazil.

In 1920, the commission on social legislation of the Chamber of Deputies presented a plan for a labor code which was approved and sent to the Senate, but as yet the Senate has not taken up the study of the code.

Other bills which have not been voted are as follows:

1. Weekly rest.
2. Assistance by employers to sick workers.
3. Social insurance.
4. Sick benefits.
5. Establishment of retirement and pension funds for employees in private concerns, telegraph, and radio companies.
6. Pensions for street-car employees.
7. Revision of the workmen's compensation law.

Workers' and employers' organizations are concerned as to the social situation. In July, 1928, at Bello Horizonte, capital of the State of Minas Geraes, a large congress was held of commercial, industrial, and agricultural organizations, which adopted the following resolutions:

1. The extension of social legislation in Brazil should be limited as long as conditions do not change and production does not develop.
2. The national work is carried on in large part by rural workers who have been abandoned to their fate in the interior of the country and who do not receive the necessary assistance from the public authorities.
3. The conditions of transportation, communication, primary, and technical instruction should be improved and laws on hygiene should be passed.

4. In the preparation of labor laws special attention should be given to the particular conditions of the Brazilian people, and copying laws of foreign countries unadaptable to Brazilian requirements should be avoided.

5. It is desirable that technical organizations should hasten the study of social legislation in order to adopt it provisionally, taking into consideration the agreements concluded between employers, employees, and the State.

### Labor Organizations

THE LABOR MOVEMENT in Brazil has gained in strength during recent years, but up to the present time there is no central workers' organization. The greater number of associations have a syndicalist tendency. In recent years an important communist movement has also been established, which has not been successful, however, owing to the energetic measures taken by the Government to combat communism.

Reference to the principal labor organizations appears below.

#### Principal Labor Organizations

Railroad workers' organizations are as follows:

Association of Brazilian Railroad Employees of Pernambuco.

Association of Railroad Employees of the Leopoldina Railway.

Association of Brazilian Railroad Employees—Campinas.

Association of Railroad Employees of Sao Paulo.

Association for the Protection of Workers of the Railroad of Central Brazil.

#### ASSOCIATION OF TRANSPORT WORKERS, DRIVERS, CAR BUILDERS, AND RELATED TRADES (*Associação de assistência dos cocheiros, carroceiros y classes anexas*)

Organized in 1906; constitution and by-laws adopted in 1927.

*Objects.*—To promote the union organization of all transport workers and those in related trades for the defense of their social interests and their rights; to defend members involved in trade offenses; to aid them in case of illness or unemployment; and to assist families in case of death. The organization of a trade school is also planned.

*Qualifications for membership.*—In order to be admitted to membership it is necessary to be a member of the trade and over 18 and less than 50 years of age, to have a record of good conduct, and not to have been imprisoned for offenses against the common law.

*Government.*—The association is directed by a council having 15 members, 6 of whom are on the executive committee. The other members of the council form three committees: The membership committee (*commission de syndicat*), the relief committee, and the finance committee.

*Benefits.*—The benefits consist of medical care and medicines up to a value of 25 Swiss francs a month for six months and of 12 francs per month thereafter; transportation costs up to a maximum of 35 francs when a sick person must be taken to another place than that in which he lives; funeral expenses up to a maximum of 30 francs; and a benefit of 60 francs to families of deceased members.

*Headquarters.*—66 Camerina Street, Rio de Janeiro.

*Membership.*—The number of members in 1928 was 9,877.

#### LONGSHOREMEN'S UNION (*Union de obreros estibadores*)

This union was founded at Rio de Janeiro in 1913.

*Objects.*—The purposes of the association are the material and intellectual development of the members; defense of their rights in accordance with principles of order and respect for civil authority; protection of members in case of prosecu-

tion or of trouble with the police in the exercise of their trade; improvement of working conditions and wages; mediation in labor disputes; and the union organization of dockers in all Brazilian ports. The organization plans to establish schools and libraries in all parts of Brazil and a journal of propaganda is published.

*Government.*—The executive committee consists of 5 members and in addition there is a council of 12 members divided into 3 committees: Finance, membership, and relief.

*Benefits.*—Members are entitled to medical and other assistance in case of sickness and a benefit is paid to the families in the case of death.

*Membership.*—The organization has nearly 5,000 members.

#### ASSOCIATION OF MARINE ENGINEERS (*Sociedad de motoristas maritimos*)

This union, which is syndicalist in character, was organized in 1927.

*Objects.*—The organization works for the trade interests of the members, encourages the organization of members for mutual benefit, and assists members in case of illness and their families in case of death.

*Qualifications for membership.*—A candidate for membership must submit credentials from the port authorities, must be in good health and have a record of good conduct, and must be under 70 years of age.

*Government.*—The association is managed by a committee of five and there are three committees, having charge of finances, relief, and membership.

*Dues.*—An initiation fee of 10 francs is charged and dues of 2 francs a month for maintenance of the relief fund.

*Benefits.*—In case of illness members are entitled to 50 francs a month for the first three months and 12 francs a month for the following 12 months. In case of death the family receives 35 francs.

*Headquarters.*—66 Camerino Street, Rio de Janeiro.

#### ASSOCIATION OF FIREMEN (*Chauffeurs*)

This association was organized in 1913 but the constitution and by-laws were not adopted until 1925. There are branches in the various States of Brazil.

*Qualifications for membership.*—In order to be eligible for membership a person must be over 18 and under 45 years of age.

*Government.*—The organization is directed by a committee of 10 elected at the annual congress.

*Dues.*—There is an initiation fee of 45 francs and monthly dues of 3.5 francs.

*Benefits.*—Sick members are entitled to a benefit of 55 francs per month, and a clinic is maintained to provide medical care for the members.

#### PROTECTIVE UNION OF STREET-RAILWAY EMPLOYEES (*Uniao protectora dos conductores de vehiculos a mao e classes anexas*)

This union was organized in 1919.

*Objects.*—The union is organized from a mutualistic rather than a syndicalistic point of view. Its purpose is the defense of the members in the interests of justice, improvement in their living conditions, and assistance in case of illness or unemployment.

*Qualifications for membership.*—In order to be eligible for membership a person must be a member of the trade, must be indorsed by two members of the union, and must be over 18 and under 60 years of age. He must also present an identification card from the police and must be in good health.

*Government.*—The union is directed by a council having seven members.

*Dues.*—The initiation fee is 5 francs, and the monthly dues 1.80 francs. Each member is assessed 5 francs when a member dies.

*Benefits.*—The benefits paid in case of sickness is 38 francs per month for the first three months and 28 francs per month for the remainder of the year.

*Headquarters.*—60 Camerino Street, Rio de Janeiro.

*Membership.*—There are about 1,500 members.

#### IRON AND STEEL WORKERS' UNION (*Uniao dos operarios ferradores*)

This union, which is syndicalistic rather than mutualistic in its aims, was founded in 1919.

*Objects.*—To encourage the association of all ironworkers for defense of their trade interests and to assist members in case of illness or unemployment.



*Qualifications for membership.*—Must be a skilled worker or an apprentice, have received primary schooling, have a record for good conduct and be more than 14 and under 70 years of age.

*Government.*—A council of 12 is elected annually by the general assembly, 6 of these members forming the executive committee.

*Dues.*—The initiation fee is 8 francs and the dues 1.60 francs per month.

*Benefits.*—Members receive cash benefits during sickness amounting to 28 francs per month for the first six months and 12 francs a month thereafter, and medical care. A death benefit, the amount of which varies according to circumstances, is paid.

#### BENEFICIAL UNION OF CARRIAGE WORKERS (*Uniao beneficente dos trabalhadores em vehiculos*)

This union, which was established in 1923 at Rio de Janeiro, is an example of the mutual type of organization.

*Objects.*—The principal purpose is to render aid in case of sickness or unemployment.

*Qualifications for membership.*—A person must have good health, a record of good conduct, and must be more than 12 and under 50 years of age.

*Government.*—The society is directed by an executive council of 14 members elected biennially by the general assembly. Three committees, dealing with finances, relief, and membership, are appointed annually.

*Dues.*—The initiation fee is 6 francs and the monthly dues 1.80 francs.

*Benefits.*—Sick benefits amount to 38 francs per month for the first six months and 18 francs thereafter. If a member is obliged to leave the country on account of sickness he receives 90 francs and if he must change his residence within the country 60 francs.

#### SOCIAL AND BENEFICIAL UNION OF FREIGHT HANDLERS OF THE FEDERAL DISTRICT (*Centro social e beneficente dos carregadores do distrito federal*)

This union was organized in 1916 and the constitution and by-laws were adopted in 1921.

*Objects.*—The organization of workers engaged in loading and unloading merchandise, provision of medical and other care for members who are sick and assistance in the case of death, and defense of members when imprisoned.

*Qualifications for membership.*—Must be a member of the trade and have a record of good conduct.

*Government.*—The union is in charge of an executive committee having four members.

*Dues.*—There is an initiation fee of 5 francs and monthly dues of 1.80 francs.

*Benefits.*—Benefits in case of sickness are 35 francs for the first three months and 18 francs thereafter until recovery; 60 francs is allowed if a member moves to another location, and 14 francs is paid in case of imprisonment.

#### BENEFICIAL ASSOCIATION OF HOSPITAL ATTENDANTS AND PHARMACISTS (*Centro beneficente dos enfermeiros empregados em hospitales e farmacias*)

This organization was established in Rio de Janeiro in 1925 for nurses, attendants in hospitals and sanitariums, and pharmacists.

*Objects.*—The principal purpose for which the organization was founded was to establish a school for nurses but it also maintains a clinic for members and their families. It is also proposed to establish a retirement fund for the members.

*Qualifications for membership.*—To become a member a person must be over 14 and under 50 years of age, must have good health, and must be accepted by an admittance committee.

*Government.*—The society is directed by a general assembly which meets four times a year and there are an executive committee and a control committee elected by the assembly. There are also a finance and a hospital committee.

*Benefits.*—Members of the society who are incapacitated for work receive 80 francs for the first three months and 28 francs a month for the remainder of the year. There is a death benefit of 100 francs.

**BENEFICIAL ASSOCIATION OF COAL AND METAL MINERS** (*Associacion de beneficiencia de los trabajadores de carbon y minerales*)

This association, which is one of the most important in Brazil, was organized in 1905 and its constitution and by-laws were adopted in 1910.

*Objects.*—The union organization of all miners, the securing of wage increases and a reduction in the hours of work, the establishment of a general federation of longshoremen (*transports maritime*), and the organization of an association for the assistance of coal passers in the different parts of the country. The association is pledged to work for national and international solidarity without regard to political ideas or nationality.

*Qualifications for membership.*—In order to be admitted to membership a person must have a record for good conduct.

*Government.*—The executive committee, which is elected by the general assembly, consists of five members and there are nine other members of the other committees.

*Dues.*—Initiation fee of 5 francs and monthly dues of 2.50 francs.

*Benefits.*—A retirement and sick benefit fund is being organized.

*Headquarters.*—Rio de Janeiro.

**AGRICULTURAL WORKERS' UNION** (*Sociedad uniao dos agricultores*)

This is the most important association of agricultural workers in Brazil. It was organized in 1914. The difficulty of communication, the enormous extent of agricultural undertakings, and the scattered population accounts for the lack of organization among this class of workers.

*Government.*—The union is managed by a council of 16, elected at the annual congress.

*Dues.*—The monthly dues are 2.80 francs.

*Benefits.*—Sick benefits amount to 18 francs per month for the first four months, 9 francs, the four months following, and 7 francs, up to the time of complete recovery. A death benefit not to exceed 70 francs is paid to the family.

*Headquarters.*—Rio de Janeiro.

**MUNICIPAL EMPLOYEES' ASSOCIATION, RIO DE JANEIRO** (*Circulo dos operarios municipais*)

Organized in 1921 and constitution and by-laws adopted in 1923.

*Object.*—The advancement of syndicalism.

*Qualifications for membership.*—A person must be over 14 and under 55 years of age.

*Government.*—An executive council of 12 members directs the organization.

*Dues.*—There is an initiation fee of 5 francs and monthly dues of 1.80 francs.

*Benefits.*—The sick benefits vary according to the length of membership. A death benefit is paid by levying a tax on each member, the maximum amount paid to a family being 200 francs. Members are entitled to legal, medical, and dental care. Medicines are furnished and articles of food are furnished at reduced prices.

**PRINTING WORKERS' UNION**

The printing workers are organized in a union which has its headquarters in Rio de Janeiro. A journal called "La voz de los graficos" (The Voice of the Printing Workers) is published. The printing workers of Sao Paula are also organized.

**Other Workers' Organizations**

Other workers' organizations of importance are:

Union of Textile Workers, created in 1917, center at Rio de Janeiro (Rua Acre 19).

Circle of Catholic Workers of Fortaleza in the State of Ceara.

Union of Building Trades Workers, Rio de Janeiro (Plaza de la Republic, 56).

Union of Hotel Workers, Rio de Janeiro.

Federation of Workers of the Soviet Union, Rio de Janeiro.

Federation of Fisherman (10,000 members), center at Rio de Janeiro.

Syndicalist Federation of the Rio de Janeiro Region. Tendencies are communistic.

Salaried workers in Brazil are also organized. Their principal organizations are:

Association of Commercial and Industrial Employees of Nictheroy, Rio de Janeiro.

Association for benefit and Protection of Brazilian Employees of the Western Telegraph Co. (Ltd.) at Rio de Janeiro.

Union of Commercial Employees at Petropolis, Rio de Janeiro.

Association of Commercial Employees at Rio de Janeiro.

Union of Commercial Employees, organized in 1908 (18,000 members at present). This union has a large building and labor bank.



# LABOR TURNOVER

## Labor Turnover in American Factories

By W. A. BERRIDGE, ECONOMIST, METROPOLITAN LIFE INSURANCE CO.

THIS article represents a final report to the United States Bureau of Labor Statistics, and through it to the readers of the *Monthly Labor Review*, on the factory labor turnover project inaugurated more than three years ago by the Metropolitan Life Insurance Co. through its Policyholders' Service Bureau.<sup>1</sup> The project was undertaken avowedly as an experiment, with a view chiefly to determining whether it was desirable and practicable to set up current, national index numbers of factory labor turnover experience, analogous to other current index numbers commonly available—those of employment, earnings, volume of industrial production, volume of retail trade, commodity price level, and the like. Experiments prior to 1926 at Brown University had seemed clearly to demonstrate that, for a local industrial area at least (in that case the State of Rhode Island), such a project was both practicable and useful to those managing industry. Other earlier experiments—exemplified by the work of Slichter, Brissenden, and Frankel, among others—had resulted in the compilation of certain composite data on factory turnover experience, but usually for a fairly long period (such as a year, without subdivision) and also without regard to setting up any continuing plan for compiling and issuing composites at any regular interval.

Beginning January 1926, the Metropolitan Insurance Co. began to issue each month composite indexes for the following labor-turnover variables: (1) Accession rate; (2) total separation rate; (3) voluntary quitting rate; (4) discharge rate; and (5) lay-off rate. The most practicable measure of exposure for use as a denominator in calculating these rates proved to be the mean number on pay roll. The form of average selected, after considerable experimentation, for compiling the rates was the unweighted median—except in the case of the total separation rate, which is the arithmetic sum of the median quitting rate, median discharge rate, and median lay-off rate.<sup>2</sup>

The company has from time to time invited and secured cooperation of local agencies, now numbering 12. Such cooperation has been most cordial and effective in making the experimental project a suc-

<sup>1</sup> The necessary research and the launching of the project were handled by the present writer while a member of that bureau; more recently, it has been carried on by Mr. Lloyd R. Miller, who also has gone a step farther in demonstrating the practical application of labor-turnover indexes and labor-stability data by personnel managers.

<sup>2</sup> Further details on the technical aspects of this project appeared in the *Personnel Journal*, June, 1927.

cess. The policy has been to transfer to these cooperating agencies, as a nucleus for local indexes, such manufacturers' returns as had been previously rendered directly to the company. The list of cooperating agencies, in alphabetical order, is given below:

Associated Industries of Massachusetts.

Brooklyn Chamber of Commerce.

Brown University.

Connecticut Industrial Council.

Employers' Association of New Haven.

Illinois Industrial Commission.

Indiana University.

Manufacturers' Association of the City of Bridgeport.

Manufacturers' Association of Meriden.

Ohio State University.

Rutgers University.

University of Denver.

University of Michigan.

Since the issuance of the first current indexes of national turnover three and one-half years ago, it has been possible to secure enough reports for earlier years to justify the extension of all five variables back to January, 1919, by months. The tables at the end of this brief article present all these data for the entire period; each month's rates are calculated on an "equivalent annual basis," in conformity with the usual practice of personnel managers. As the time has now come when the company and the Bureau of Labor Statistics both feel that the factory-turnover project has passed beyond the experimental stage and justified its acceptance as a "going concern," the enterprise has been transferred (effective July 1, 1929) to the bureau, which in future will itself handle the compilation, analysis, and announcement of results each month.

The bureau will also handle such supplementary and supporting studies as may concern factory-labor turnover, for example, periodic censuses of length of service distribution in factory work forces; two such censuses have been taken by the Metropolitan.<sup>3</sup> Such special studies have proved useful in interpreting the current course of the turnover indexes, and in demonstrating their practical value in the handling of personnel managers' problems. It is hoped that, by the transfer of jurisdiction, the number of establishments reporting turnover to collecting agencies in the United States (now numbering probably 600 manufacturers, of whom about 350 are incorporated in the composite national index numbers) can be considerably expanded. If so, the time should soon come when the size of sample will justify setting up a set of turnover indexes for certain individual lines of manufacture, supplementing the general national indexes, and the indexes for individual localities already established by cooperating agencies.

By mutual consent the Metropolitan will continue further experiments in labor-turnover analysis and related problems, including possible index numbers, month by month, of turnover experience in other lines of activity than manufacture.

<sup>3</sup> Findings from the later one were summarized in the *Monthly Labor Review*, October, 1928, pp. 53, 54.

## MONTHLY LABOR REVIEW

## INDEXES OF FACTORY LABOR TURNOVER

[All rates are stated as percentages of number on pay roll—equivalent annual basis]

*Median accession rate*

Month	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
January	112.0	125.0	31.0	58.0	122.0	57.5	53.0	56.5	36.3	33.4	58.6
February	59.0	131.0	30.0	62.0	120.5	49.5	49.5	56.1	41.7	31.6	56.9
March	74.0	140.0	32.0	70.0	122.5	39.5	51.5	56.5	43.2	35.9	61.2
April	83.0	129.0	35.0	79.0	143.0	47.5	56.5	52.3	47.5	40.0	70.2
May	82.0	132.0	39.0	109.0	141.0	31.5	45.5	60.0	48.0	47.2	59.9
June	111.0	186.0	22.0	109.0	159.0	32.5	71.5	57.2	45.0	41.3	-----
July	200.4	174.0	14.0	118.0	133.5	30.0	64.5	54.2	37.8	46.9	-----
August	143.0	150.0	18.0	127.0	87.5	31.5	79.0	65.9	39.6	55.7	-----
September	156.0	136.0	26.0	112.0	102.5	38.0	84.5	69.4	43.6	56.9	-----
October	218.0	83.0	61.0	118.0	80.5	33.5	73.5	57.7	40.8	57.1	-----
November	124.0	44.0	47.0	100.0	48.5	44.0	65.5	40.2	31.6	50.1	-----
December	93.0	29.0	41.0	91.0	40.5	40.0	47.5	27.1	23.7	38.1	-----
Average	121.3	121.6	33.0	96.1	108.4	39.6	61.8	54.4	39.9	44.5	-----

*Median quit rate*

Month	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
January	47.2	96.8	21.2	18.9	48.4	30.7	26.0	27.1	23.1	15.7	26.7
February	41.6	103.3	20.8	23.4	71.5	27.7	26.0	27.4	21.8	15.1	31.0
March	50.7	140.4	29.5	26.0	85.0	44.8	35.4	35.3	29.8	20.1	36.8
April	54.9	142.7	32.9	36.6	115.9	57.3	48.8	46.2	32.4	26.0	43.3
May	57.8	105.0	29.5	55.5	100.3	42.5	40.1	37.7	31.9	28.2	40.8
June	95.2	118.3	34.2	64.7	102.5	30.5	41.5	35.3	29.1	27.1	-----
July	68.4	122.7	29.5	61.4	92.0	26.0	37.8	38.9	24.4	27.2	-----
August	88.5	126.3	28.3	70.8	77.9	26.0	40.1	40.0	23.0	31.9	-----
September	96.4	114.7	32.9	83.0	86.6	30.5	50.0	47.5	33.8	40.3	-----
October	85.0	72.0	24.8	69.6	54.3	27.1	42.5	31.8	25.3	31.9	-----
November	84.2	39.0	20.7	61.0	37.8	19.5	30.5	25.6	18.0	25.6	-----
December	66.1	29.5	16.5	41.3	26.0	21.2	24.8	20.0	14.8	20.1	-----
Average	69.7	100.9	26.7	51.0	74.9	32.0	37.0	34.4	25.6	25.8	-----

*Median discharge rate*

Month	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
January	22.0	16.0	6.5	4.5	11.5	6.5	6.5	7.1	5.4	3.6	5.3
February	15.0	13.0	5.5	3.0	10.5	5.5	7.0	6.5	5.5	4.6	6.0
March	7.0	14.0	5.5	7.0	16.5	7.5	6.5	8.2	6.3	4.3	6.7
April	10.0	13.0	5.0	8.5	13.0	7.5	7.5	8.5	6.2	5.1	6.9
May	13.0	13.5	3.0	7.0	14.5	8.5	6.5	7.1	5.2	5.0	5.6
June	9.5	11.5	6.0	8.0	11.5	6.0	6.0	4.9	6.8	4.9	-----
July	13.0	15.0	4.5	9.0	12.5	4.5	5.5	7.1	5.3	4.9	-----
August	15.5	12.0	4.0	10.0	12.5	6.5	4.5	7.1	4.9	5.3	-----
September	15.5	13.5	3.0	9.0	12.5	7.5	8.5	6.1	6.0	5.3	-----
October	18.0	15.5	2.5	9.0	12.5	5.5	7.5	7.1	5.8	5.3	-----
November	13.0	8.5	2.5	11.5	8.5	5.5	5.5	6.1	4.2	4.9	-----
December	9.5	8.5	2.5	10.0	4.5	4.5	5.5	3.5	3.8	4.4	-----
Average	13.4	12.8	4.2	8.0	11.7	6.3	6.4	6.6	5.5	4.8	-----

*Median lay-off rate*

Month	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
January	41.8	1.6	45.4	9.0	3.5	5.5	3.5	4.7	12.3	8.5	4.2
February	19.2	.8	27.4	7.0	1.5	3.5	3.5	6.5	9.6	7.9	4.7
March	9.8	.8	30.8	7.0	1.0	5.5	5.5	7.1	6.4	8.4	5.7
April	4.4	.0	21.8	5.8	1.5	7.5	7.0	6.1	9.7	7.1	5.5
May	6.4	.6	14.8	3.8	1.5	10.5	5.5	5.9	7.6	8.3	5.7
June	1.0	1.0	16.8	2.8	1.5	10.5	4.0	6.1	8.0	7.5	-----
July	2.2	2.6	16.2	2.2	2.5	6.5	4.5	7.1	6.0	5.9	-----
August	2.0	3.8	18.8	3.2	3.5	6.0	4.5	4.7	8.5	5.1	-----
September	.0	2.6	29.8	4.0	5.5	7.0	3.5	4.9	6.4	5.0	-----
October	.0	15.4	11.8	3.8	4.5	7.5	4.5	4.7	8.5	4.7	-----
November	.0	36.8	9.8	3.2	11.5	9.5	5.0	8.5	9.3	4.8	-----
December	.0	49.8	15.0	1.8	4.5	4.0	4.5	7.1	8.6	4.7	-----
Average	7.2	9.7	21.5	4.5	3.5	7.0	4.6	6.1	8.4	6.5	-----



## INDEXES OF FACTORY LABOR TURNOVER—Continued

Total separation rate <sup>1</sup>

Month	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
January.....	111.0	114.4	73.1	32.4	63.4	42.7	36.0	38.9	40.8	27.8	36.2
February.....	75.8	117.1	53.7	33.4	83.5	36.7	36.5	40.4	36.9	27.6	41.7
March.....	67.5	155.2	65.8	40.0	102.5	57.8	47.4	50.6	42.5	32.8	49.2
April.....	69.3	155.7	59.7	50.9	130.4	72.3	63.3	60.8	48.3	38.2	55.7
May.....	77.2	119.1	47.3	66.3	116.3	61.5	52.1	50.7	44.7	41.5	52.1
June.....	105.7	130.8	57.0	75.5	115.5	47.0	51.5	46.3	43.9	39.5	-----
July.....	83.6	140.3	50.2	72.6	107.0	37.0	47.8	53.1	35.7	38.0	-----
August.....	106.0	142.1	51.1	84.0	93.9	38.5	49.1	51.8	36.4	42.3	-----
September.....	111.9	130.8	65.7	96.0	104.6	45.0	62.0	58.5	46.2	50.6	-----
October.....	103.0	102.9	39.1	82.4	71.3	40.1	54.5	43.6	39.6	41.9	-----
November.....	97.2	84.3	33.0	75.7	57.8	34.5	41.0	40.2	31.5	35.3	-----
December.....	75.6	87.8	34.0	53.1	35.0	29.7	34.8	30.6	27.2	29.2	-----
Average.....	90.3	123.4	52.5	63.5	90.1	45.2	48.0	47.1	39.5	37.1	-----

<sup>1</sup> Rate is stated as arithmetic sum of median rates of voluntary quits, discharges, and lay-offs.

# INDUSTRIAL AND LABOR CONDITIONS

## The Negro in Industry and Business

**I**N ITS issue for May, 1929, Opportunity, the organ of the National Urban League, devotes much of its space to papers and addresses given at the annual conference of the league held at Louisville, Ky., April 9-12, 1929. To a large extent, the discussions were concerned with the effects of two comparatively recent developments—the movement of colored workers from the farm to the city and the changes in their occupations consequent both on this and on the increasing competition with white workers. In moving from the country to the town and the city the negro, it was pointed out, is merely following the migration of the whites. For years past the white workers of the rural South have been going from the country to the mill village and thence onward to the city, and this movement has been accelerated lately by modern methods of cultivation which give the large owner an advantage over the small farmer. The negro, whether tenant farmer or hand, is moving from the country as the diversification of crops and the introduction of large-scale methods of cultivation make it harder for him to keep his foothold. But as he goes into the southern cities he finds a competition there which formerly he did not meet. Certain kinds of work were traditionally his; white men lost caste by taking them. But city industries are largely machine industries, and the growing productivity of the machine has decreased relatively the demand for men. In the growing struggle for employment, old traditions are thrown into the discard, and the negro finds himself meeting white competition for jobs long regarded as his by prescriptive right.

White men are driving trucks and express wagons in the South, repairing streets, doing the scavenger work, delivering ice on their backs where formerly negroes delivered and white men collected for deliveries, serving as waiters and bellmen in hotels, and doing other tasks which were once regarded only fit for negroes.

Naturally, this process makes it more difficult for a negro to find employment, but his difficulty is not due to any plot against negro welfare, intentionally fostered by prejudiced whites; it is simply a natural result of changing economic conditions. Moreover, it is coincident with the penetration of negroes into lines in which they were not formerly employed, according to Mr. T. Arnold Hill, industrial director of the league, who lists a few of the occupations in which they are making gains:

Negro salesmen and saleswomen are becoming more numerous. White firms are using them to sell goods among their race. Chain stores and some few department stores in Chicago are giving employment to saleswomen. More automobile mechanics and drivers of trucks and cars are being used to-day than ever, and an increasing number of men and women are entering the field of industrial chemistry.

Speaking along the same general lines, Charles S. Johnson gave the results of a study he had made to find out what the negroes in the cities are actually doing. Taking 200 families, representing about 1,000 persons, in Nashville, Tenn., a city in which the negro population forms about 30 per cent of the total, he had inquired into their occupations. There were 190 male heads of families and chief breadwinners; less than 8 per cent were involuntarily unemployed; and there were 53 persons, or 27.3 per cent of the total, in occupations that might be described as new for negroes.

There were 11 truck drivers, 4 contracting carpenters, 4 grain weighers and workers, 3 concrete finishers for road work, 2 garage workers, 2 bootleggers, and a string of such other occupations as mortar mixer, concrete mixer, automobile mechanic, gas-pipe layer, car washers, floor waxer, telephone lineman, ice and coal dealers, acid testers, hosiery mill packer, blue-print operators, junkman, linotype setter, insurance agent, machinist's helper, boiler maker's helper, chiroprapist, embalmer, and sales manager.

Prof. Broadus Mitchell, of Johns Hopkins University, stressed the fact that social principles are not immutable, and that they are constantly being altered by economic forces. It is often claimed that the negro is unfit for industrial employment, that he is shiftless, unskillful, and unreliable, and that while he is a good agricultural worker he can not fit into the tempo of modern industry. All these things were also said of the poor whites when they were first brought into industry.

Few darker pictures have ever been painted of any population than were used to describe the poor whites of the southern tenant farm and mountain holding. The poor whites were declared to be hardly above the status of the settled Indian—ignorant, dirty, immoral, vicious, and above all, lazy.

Just as the poor white, however, proved excellent industrial material when once adapted to such employment, so will the negro. The machine age is changing the social life of the South, the supply of poor whites available for the new industrial system is getting low, and the negro is the natural resource for the employer who must have more labor. "The machine is destined to be the greatest modifying influence upon the life of the negro in the South." There is a real danger, however, that the industrial use of the negro may go through the same stages as the industrial use of the poor whites—exploitation, long hours, poor wages, and a general submergence of the South's industrial labor.

The greatest hope for the solution of this problem lies, however, in the growing diversification of southern industry. The cotton manufacture has been held the white man's employment because there was almost no other industry. Every new industrial opportunity that opens means that greater latitude will be allowed to the negro. The negro's entrance into industry will be through the door of the rougher operations first and he will probably fall heir to industries presenting bad conditions previously deserted by white workers. The whites in the South have been through an industrial tutelage which has been long and still is arduous, but with all its drawbacks it has meant salvation, and I think we may predict the same for large numbers in our negro population.

### The Negro in Business

A DIFFERENT ASPECT of the question of negro progress is presented by a study made in 1928 by the National Negro Business League, with the general purpose of finding out what the negro is doing in



business, how he is doing it, and along what lines increased effort can be most fruitfully applied. The study was made in 33 cities, mostly in the West and South, with an aggregate population of 5,066,936, of whom 920,283 were colored. It included a total of 2,817 enterprises of colored business men, 60 being financial institutions, such as banks, insurance companies, building and loan associations, and the like, while 2,757 included representatives of most forms of business activity, ranging from grocery stores to undertaking establishments, and from barber shops to building and excavating contractors. Grocery stores formed the largest group, numbering 526, barber shops came next with 380, restaurants and tailoring establishments, with 309 and 312, respectively, were nearly on a par, drug stores numbered 187, auto repair and service stations 169, undertaking establishments 154, and from these the numbers decreased to 10 real estate concerns and 5 fruit and vegetable shops. Most of these are small-scale businesses, the average number of employees per enterprise running from a trifle over 2 in the flower shops and miscellaneous stores to 20.5 for the building and excavating firms. The financial enterprises differed sharply from the others in this respect, having a total personnel of 5,090, or an average of 84.8 employees per business; this is largely due to the inclusion of the field force, who number 3,916, and form 77 per cent of the total.

Excluding the financial enterprises, the great majority of the businesses were individually owned, 2,191, or 79.4 per cent, coming under this classification; 334, or 12.1 per cent, were partnerships, and 109, or 3.9 per cent, were corporations, while as to the remainder the facts were not reported. A study of methods of bookkeeping showed that of 2,466 reporting on this item, 1,639, or 66.5 per cent, used single entry; 371, or 15 per cent, used double entry; 35 used manifold systems; and 421, or 17 per cent, kept no records. The majority purchased their supplies from local wholesalers, but a considerable group bought from the open market—i. e., from dealers outside of the immediate community in which the buyer is located—frequently on bids. Of the total group of 2,757, 1,703, or 62 per cent, advertised their business, while 830, or 30 per cent, reported that they did not advertise, and the remainder made no report on the subject. Negro newspapers were naturally the favorite advertising medium, being used by 1,080, or 63 per cent, of those who advertised at all, but white newspapers, negro and white magazines, and direct mail methods were also used. A study of business longevity showed that 883, or nearly one-third of the group, had been in existence for 10 years or longer. A report upon the volume of business done showed that a trifle over one-sixth (466) had an annual volume of from \$15,000 upward, as follows:

	Number
\$15,000 and under \$25,000	218
\$25,000 and under \$50,000	179
\$50,000 and under \$100,000	54
\$100,000 and under \$500,000	15
Total	466

The report stresses the fact that while, in the main, the businesses studied were small enterprises, with the drawbacks and deficiencies natural to their size, the group not only contained some large and

important undertakings but also showed a creditable number making use of modern methods of buying, advertising, and conducting their affairs. But for the small retail stores, which form so large a proportion of the group studied, present conditions call for some changes if modern competition is to be successfully met, and two are cited as of special importance:

First, the grouping of retailers into chains or buying associations in order to effect economies in managerial costs and to obtain the advantages of larger-scale buying.

Second, the introduction of more careful methods of carrying on the business so as to reduce waste and needless cost.

Another point brought out by the survey is that the field of negro advertising is not being adequately worked.

It is believed and hoped that the findings of this survey will open up to national advertisers the possibilities of developing the negro field. The 12,000,000 negroes in America represent a compact, race-conscious group which is, year after year, becoming better educated and more and more economically independent. These factors of progress comprise the elements of interest for advertisers who will be seeking to develop new outlets for their business.

It will be noticed that in both industry and business the negroes are not despondent as to their position. In industry, the advance of the machine and the change from country to city conditions are causing a transition period in which they are here losing, there gaining ground, but in which, on the whole, their leaders believe they are making progress. In business they are taking stock of the situation, with a view to finding where and why they are most successful, and how they can best strengthen their position. Five years hence they propose to repeat this survey, using the data of the present study for comparative purposes. Meanwhile, they recognize that in both fields they are hampered by the traditional view of what they are capable of doing, by their own lack of experience in the new fields they are entering, in some places by a certain amount of racial prejudice, and everywhere by an increasingly keen competition from white workers as machine productivity tends to reduce the need for man power. So, in both business and industry, they are striving to organize their own forces to improve the present situation, to open up new opportunities for training and experience, and to use their own economic power as a means for helping themselves to better conditions.

### Industrial Relations in a Large Sugar Refinery

**T**HE expansion and success of the California & Hawaiian Sugar Refining Corporation are largely due to the general morale of its employees, according to a recent study of this important business organization.<sup>1</sup> For many years, the author states, the maintenance of proper industrial relations has been a matter of constant concern to the management, and efforts are continually being made to understand the worker and his viewpoint, to prevent even the beginnings of dissatisfaction, and to insure mutual confidence and successful cooperation.

<sup>1</sup> Emmet, Boris: *The California & Hawaiian Sugar Refining Corporation. A study of the origin, business policies, and management of a cooperative refining and distributing organization.* Stanford University, Graduate School of Business, 1928. Stanford business series No. II



The management holds that low production costs are often the outcome of good wages. The basic wage, therefore, in this corporation, the author states, is rather higher than that paid for similar work being done elsewhere in the San Francisco Bay region, and substantially higher when one considers that living costs are not quite so high in Crockett (population 5,000) as in the larger towns and cities of this region.

The six main interests of the worker are listed by the management as follows:

(1) A reasonably good annual income (that is, a good base wage and continuous employment throughout the year); (2) security of employment (that is, freedom from arbitrary discharge); (3) insurance against loss of earnings due to sickness or disability; (4) absence of managerial arbitrariness; (5) good and reasonably cheap housing; and (6) interesting community life.

That the corporation is very successfully meeting these problems is evidenced in the improving stabilization of its personnel. Moreover, an analysis of labor turnover and production costs indicates that the labor policy of the corporation has been highly effective from a business viewpoint.

### Refining Division

*Industrial relations department.*—In 1906 when the corporation began operating one employment clerk constituted the industrial relations department. At present the department has the following seven major groups of activities:

I. Employment and personnel—including labor supply, recruiting, adjustments, and personal service.

II. Safety—including accidents and their prevention, fire prevention and protection, and plant protection.

III. Health and sanitation.

IV. Training and education.

V. Housing and community activities.

VI. Publicity or public relations.

VII. Records and research.

*Composition of working force.*—On February 1, 1928, the total working personnel of the refinery, including supervisory employees, was 1,519, of whom approximately 12 per cent were women. Slightly over one-half of the force was in the operating department; 23.4 per cent in the engineering department; 12.9 per cent in the warehouse department; 3.3 and 3.0 per cent, respectively, in the technical and the personnel departments; and less than 2 per cent in each of the remaining departments of the refinery.

Of the total force employed in the refinery in 1928, 41.8 per cent were born in the United States, 20.3 per cent in Italy, 8.6 per cent in Portugal, 7.7 per cent in Mexico, and 6.8 per cent in Great Britain.

In placing new workers careful consideration is given to their physical fitness for available jobs.

It is the opinion of the management that the Portuguese laborer, with his broad, heavy shoulders, is particularly fitted for trucking and the handling and piling of bags of sugar in the warehouse. Mexicans are said to be particularly adapted to work in the charhouse, where high temperatures prevail. A certain type of Italian, it is believed, fits best on the centrifugal machines. Native Americans usually begin their service with the company in the packing house.



Through the instrumentality of the company the local high school has developed Americanization courses which have "produced gratifying results."

*Employment and follow-up.*—The application blank for the prospective worker calls for necessary personal data and a record of previous employment. Most of the applications are made in person at the refinery gate. At present the number made in this way exceeds the available jobs and the selection of competent workers is thus facilitated. Every applicant must pass a physical examination and will not be taken on if he or she is 50 years of age or over. The corporation's policy is to prefer applicants several years under 50.

Ordinarily new employees are placed in the packing department even when they have previous experience in the industry or have been educated in preparation for technical work. Although this procedure has the effect of discouraging the applications of a number of technical or business school graduates it assures the employees who have been longer in the service that their employers do not as a rule put new men on advanced work.

By means of a follow-up record, employees with native ability, special educational qualifications, or experience are placed under special observation and the opinions of supervisory observers are used as a basis for promotions, length of service being regarded only when those being considered for advancement are equally well qualified for a given position.

In the industrial relations department a woman assistant supervises the female employees, among whom are clerks, stenographers, and workers in the sugar-packing, container-manufacture, and laboratory departments of the refinery.

Constant efforts are made to transfer workers who do not make good in their jobs to other positions in which they may be able to give satisfaction.

*Wages and hours.*—The basic hourly rate for newly engaged refinery workers, except for the warehouse, is 58½ cents. The warehouse employees are started at 62 cents because of the heavier physical work.

A tabulation for October 1, 1927, shows that 89.9 per cent of the refinery's male employees and 71.8 per cent of the female employees were paid on a monthly or on an hourly basis. Slightly over 10 per cent of the men worked on the premium system of collective bonuses.

Male employees on an hourly basis are paid time and a half for overtime, while monthly male employees who work overtime are allowed equivalent time off. Under the California law women are not permitted to work over 8 hours a day.

For many years the following bonuses have been received by members of the personnel:

A full month's salary to monthly employees earning \$200 or more, and one-half month's salary to monthly employees earning less than \$200. These bonuses are paid after the employee has served a full year. Proportional payments are made for each month less than a year's service. Hourly employees receive a flat bonus of \$10 each.

The author states that the refinery was the first in this country to substitute three 8-hour shifts for two 12-hour shifts. Operations continue 12 days and nights, terminating in a 2-day week-end shut-

down. Every third week the personnel of each shift is changed. About December there is an annual shutdown.

The company's goal has been to provide work for all employees during the annual shutdown period. In early years this goal was only partially achieved, it being necessary to lay off several hundred men between the beginning of the shutdown work and the resumption of refinery operations. In more recent years, however, careful accumulation of necessary work such as the installation of new machinery, repairs, and general clean-up have made it economically possible to utilize all male employees. The length of the shutdown period is gradually being lessened because of the increased volume of business and because of an increased efficiency of the maintenance work through the operating year.

*Vacations with pay.*—Each employee who has been on the monthly pay roll for a year or more is given a vacation of 12 consecutive working-days. At present only about 25 per cent of the employees are entitled to such holiday. Plans are being considered, however, for the granting of vacations to the whole personnel.

*First aid and accident prevention.*—During the business day a registered nurse is at hand to give first aid and to check up on sick and injured employees. At night when the nurse is not at the plant, first aid may be provided through conveniently located first-aid cabinets; and foremen trained in first aid are directed to take care of the injured. First-aid classes are conducted during the annual shutdown.

As an outcome of a constant emphasis on safety in refinery and warehouse operations there is little left to be done in the matter of physical safeguards. The management realizes, however, that there is still much to be accomplished in the way of educating the employees along safety lines. At present a great deal of the work of the safety committees is directed toward such education. The corporation's success in accident prevention is evidenced by the gradual reduction in its workmen's compensation premium rates from \$2.24 in 1920 to \$1.35 in 1928.

*Employees' Mutual Benefit Association.*—On March 1, 1924, an employees' mutual benefit association began operations with two main objectives:

(1) To provide benefits for nonindustrial disabilities equivalent to two-thirds of the normal earning capacity of members, and (2) to make up the difference in industrial accident disabilities between the maximum allowance under the State compensation law and two-thirds of the normal earnings of the disabled member.

Members contribute 77 cents per month per \$100 of earnings. The total monthly contributions thus made are matched by an equal amount per month paid by the corporation. Membership is optional, provided the employee's minimum earnings are less than \$300 per month. The association is very popular. In the disability division 97.5 per cent of eligibles are members of the association; in the mortality division the average per cent of eligibles is 92.24.

*Personnel and welfare work.*—Constant improvements are being made by the management in the facilities provided in the interest of the health, convenience, and agreeable working conditions of employees. Among these facilities are individual lockers, shower rooms, lunch places, rest rooms, and drinking fountains.

In 1926 optional group insurance was inaugurated. On January 1, 1928, the amount of group insurance in force was \$2,662,500 among



1,434 employees holding policies ranging from \$1,000 to \$10,000, slightly over 63 per cent of such employees having \$1,500 policies. The records for 1926 and 1927 show on the average that about 25 per cent of the cost of group insurance was paid by the corporation and 75 per cent by the employees.

The establishment of a pension scheme is under consideration.

In the last few years the refinery workers' opportunities for education have been confined to those afforded by the Crockett High School. The corporation often suggests desirable courses not previously conducted and encourages the regular attendance of its employees.

The plant has a technical library for general reference and for the use of the personnel.

The technical and operating education work is distinct from the general educational activities and was inaugurated in 1927 to train supervisory employees from head operator to shift superintendent.

The new plan is unique in three ways: (1) Final qualification for a job is obtained by actually running it. (2) Advancement in pay is proposed for those qualified for new positions but still remaining in old jobs because of temporary lack of vacancy. (3) The training is done while the men are on the job and while actually discharging the duties of their positions.

*Housing and community activities.*—In 1920 the corporation abandoned its policy of constructing cottages to rent to its employees, in order to promote the erection and purchase of homes by the workers themselves. Under the new program 163 dwellings have been put up, of which 74 per cent were constructed for the employees with the financial aid of the corporation, 14 per cent were built for members of the force without the financial aid of the company, and 12 per cent were erected by nonemployees on lots owned by the corporation but without its financial assistance.

A number of attractive plants, shrubs, and trees are furnished gratis by the company to home owners.

The community around the refinery is largely dependent upon it. Crockett, which may be called a 1-industry town, has a population of about 5,000. Approximately 1,400 employees of the corporation live within the community, while the other 100 commute from near-by places.

In 1906 when the corporation began operations "living conditions in Crockett were in many respects deplorable." For 22 years the company has been developing the community which is now often referred to as a model one.

The development of the community has not been without its problems. Because of the company's desire to accomplish maximum results in the early years, there developed on the part of the townspeople a sense that no civic responsibility existed for them as individuals or as a group. The refinery, they thought, should attend to all necessary community matters. This tendency has since been modified and largely overcome. For several years past, community improvements have been conducted on a cooperative basis between the property owners and the company. Where possible the county, too, contributes its share.

Among the attractive features of the community are a clubhouse for men and a clubhouse for women, parks and playgrounds, boy scouts and wolf clubs, and a Christmas festival.



*Cost of industrial relations work.*—The following table shows the cost of the corporation's industrial relations activities:

TABLE 1.—COST OF CORPORATION'S INDUSTRIAL RELATIONS ACTIVITIES, 1925 TO 1927

Function	Cost per man on roll		
	1925	1926	1927
Personnel.....	\$24.55	\$27.72	\$28.86
Community activities.....	39.84	49.88	56.64
Fixed and other charges.....	11.06	10.03	13.25
Total.....	75.45	87.63	98.75

*Stabilization of the labor force.*—The supervisory staff gives constant attention to promoting regular attendance. "Advice and suggestions are given to minimize the duration of sickness or disability. Each department head is kept informed of the reasons for absences and is advised weekly of the condition and prognosis in cases of prolonged sickness."

Employees who arrive late find that their time cards have been removed and are obliged to see their immediate superiors before they can begin work.

In making dismissals the corporation distinguishes between "discharge" for a serious cause—"such as smoking, threatening or attacking a superior, or willful destruction of property—and permanent lay-offs, for reasons not as grave." This procedure is followed in order not to blacken a man's record in a way which might keep him from getting other employment. Ordinarily, two disciplinary lay-offs and a final warning precede a permanent lay-off.

Employees who voluntarily leave the employ of the company, or are laid off for lack of work, receive a work rating of from 1 to 4 to indicate the following degrees of desirability for rehiring: (1) "Excellent service and conduct"; (2) "satisfactory service and conduct"; (3) "unsatisfactory service or conduct, or both; not to be rehired"; and (4) "extremely poor service or conduct, or both; not to be rehired."

#### Labor Turnover in the Plant

As a definite indication of the "relative effectiveness of the industrial relations policy of the company" the increasing stabilization of the working personnel is cited. Among the statistics presented in this connection is the following summary of net labor turnover.

TABLE 2.—PERCENTAGE<sup>1</sup> OF NET LABOR TURNOVER, 1923-1927

Unit	1923	1924	1925	1926	1927
Entire plant.....	109.0	49.3	48.3	38.5	35.7
Warehouse.....	176.6	47.1	55.2	69.4	76.7
Plant exclusive of warehouse.....	102.4	50.3	49.8	33.5	29.3

<sup>1</sup> Ratio to the average working force of all separations (except lay-offs due to lack of work during operating season and on account of annual shutdown, and separations due to employee's request for temporary leave of absence).

In 1927 the reason given for 43.4 per cent of the voluntary quits was "for other work." Approximately 19 per cent of the voluntary

separations are ascribed to "work too hard, hot, etc.," 9.4 per cent to "returning to the old country," and 6.4 per cent to "returning to school."

The principal reason for discharges and "lay-offs for cause" is "excessive absence," which in 1927 was responsible for 58.2 per cent of the involuntary separations. In the same year the next most frequent cause for discharge was unsatisfactory service, which accounted for 23.9 per cent of the discharges.

Attention is also called to the appreciable saving in money resulting from the stabilization of labor by the corporation, the cost of breaking in new help per man on the force having been reduced from \$56.60 in 1923 to \$19.50 in 1927.

### Some Productivity Statistics

IN THE CHAPTER ON "Progress and Results," the following two tables are given, showing, respectively, the increase in labor productivity in the several processes, 1925-1927, and the changes in capital productivity, 1923-1927.

TABLE 3.—INDEX OF AVERAGE DAILY LABOR PRODUCTIVITY, 1925 TO 1927

Process	1925	1926	1927
Melting raws.....	100.0	100.77	121.69
Filtration.....	100.0	112.68	116.76
Refining.....	100.0	103.96	105.95
Main packing station.....	100.0	109.25	110.58
Powdered sugar station.....	100.0	99.19	110.90

TABLE 4.—CHANGES IN CAPITAL PRODUCTIVITY, 1923 TO 1927

Year	Ratio of value of sales to capital employed (times)	Capital employed per ton of sales
1923.....	3.01	\$52.70
1924.....	2.90	49.80
1925.....	2.57	43.70
1926.....	2.18	49.50
1927.....	2.71	43.66

Another table shows that the productivity (number of tons melted) per \$1,000 for the total investment in equipment and machinery for the entire refinery has increased from 64.3 in 1922 to 75.8 in 1927.

*Employees' inventions.*—As a result of its policy of encouraging employees to work out devices for the improvement of methods or machinery, the corporation has benefited by many ingenious ideas. When these were patentable and of sufficient merit they were patented in the inventor's name at the company's expense, the company retaining a shop license for the free use of such invention and the inventor holding all other rights.

## Changes in Kinds of Textile Materials Used for Clothing and for Household Articles

A STUDY of the changing trend in the kinds of textile fibers used for clothing and for household articles was made by the United States Department of Agriculture, through its Bureau of Home Economics, in 1927, the findings of the investigation being published in the latter part of 1928 as Miscellaneous Publication No. 31 of the department.

The report covers the 5-year period ending in the spring of 1927 and presents information as to clothing furnished by 701 married women, 444 single women 18 years of age and over supported by their families, 175 self-supporting single women 18 years of age and over, and 675 men, living in communities of different size ranging from farms to cities of 100,000 population and over.

No significant changes were reported by men in the kinds of textile fibers used for the various articles of clothing except in the case of socks, 57 per cent of the men stating that they were wearing more silk and rayon socks in 1927 than in 1922. In regard to women's garments, the report states that the figures obtained do not show that either silk or rayon has completely replaced cotton for any of the garments for which changes are noted. "They merely indicate that a certain percentage of the women included in the survey were wearing more silk or rayon garments of certain kinds in 1927 than they were five years previous." It is pointed out that in view of the high percentage of rayon sales shown by a survey made by the National Retail Dry Goods Association<sup>1</sup> the low percentage of women reporting the use of more rayon garments in this study "makes it seem certain that the replies under the heading 'more silk' for certain garments include rayon in many cases," and that it is desirable therefore to consider the "more silk" and "more rayon" replies together.

The following table compiled from the report indicates the extent of the changes in kinds of textile fibers used by women for different garments in 1927 as compared with 1922:

CHANGES IN KINDS OF TEXTILE FIBERS USED BY WOMEN FOR DIFFERENT GARMENTS IN 1927, AS COMPARED WITH 1922

### Married women

Garment	Number reporting	No. change in textile fiber	More cotton	Less cotton and more—		
				Silk	Rayon	Wool
Aprons.....	652	93.2	—	0.1	0.1	—
House dresses.....	495	79.4	6.1	10.3	1.4	1.6
Summer dresses.....	605	32.2	3.3	62.0	3.6	—
Winter dresses.....	539	38.8	—	46.9	—	16.1
Blouses.....	518	23.0	1.9	16.0	—	.2
Skirts.....	451	32.4	.7	6.2	.2	8.0
Slips.....	635	26.0	6.5	51.0	7.6	—
Petticoats.....	490	20.8	2.2	14.1	1.0	.2
Chemises and combinations.....	598	30.3	—	35.1	5.5	—
Brassieres.....	591	61.9	—	10.8	1.7	—
Bloomers.....	623	21.0	3.7	35.6	14.6	—
Drawers and step-ins.....	554	31.4	—	20.2	2.2	.2
Undershirts and vests.....	588	40.0	—	25.8	7.5	—
Knit union suits.....	571	52.9	7.2	4.2	.9	1.7
Nightgowns.....	669	85.9	—	11.7	.9	—
Pajamas.....	560	18.9	—	3.6	.2	—
Kimonos and negligees.....	615	64.9	2.4	20.0	.2	.5
Bath robes.....	572	71.3	2.3	3.0	—	4.7
Stockings.....	668	22.6	.3	75.3	2.7	.7

<sup>1</sup> National Retail Dry Goods Association. Trend of women's underwear sales. New York, 1927.



## CHANGES IN KINDS OF TEXTILE FIBERS USED BY WOMEN FOR DIFFERENT GARMENTS IN 1927, AS COMPARED WITH 1922—Continued

*Single women supported by family income*

Garment	Number reporting	No change in textile fiber	More cotton	Less cotton and more—		
				Silk	Rayon	Wool
Aprons.....	360	86.4		0.3		
House or school dresses.....	275	40.4	4.4	48.4	2.5	10.5
Summer dresses.....	403	11.7	3.7	83.6	3.2	
Winter dresses.....	369	19.8		58.3	.5	29.8
Blouses.....	351	32.5	7.1	28.5	.6	.3
Skirts.....	339	31.0	.9	15.3		23.9
Slips.....	413	10.2	1.4	75.3	6.3	
Petticoats.....	329	7.9	2.1	18.5	.6	
Chemises and combinations.....	402	15.7		58.0	8.2	
Brassieres.....	401	49.9		35.7	3.5	
Bloomers.....	425	10.1	3.1	66.1	15.3	
Drawers and step-ins.....	380	13.9		49.2	4.2	
Undershirts and vests.....	387	15.5		50.1	9.6	
Knit union suits.....	327	14.4	3.0	7.0		1.2
Nightgowns.....	398	57.8		24.1	2.3	
Pajamas.....	387	43.4		17.8	2.1	1.5
Kimonos and negligees.....	408	45.3	2.2	42.9	1.0	.2
Bath robes.....	369	69.9	1.9	8.9		7.6
Stockings.....	426		.7	79.6	2.3	.5

*Self-supporting single women*

Aprons.....	145	78.6		0.7		
House dresses.....	107	41.1	3.7	40.2	1.9	6.5
Summer dresses.....	142	20.4	3.5	76.1	.7	
Winter dresses.....	135	34.1		54.1		16.3
Blouses.....	147	23.1	5.4	17.0		
Skirts.....	135	29.6		5.9		8.9
Slips.....	162	14.8	.6	64.2	6.2	.6
Petticoats.....	146	11.6	1.4	12.3	2.0	
Chemises and combinations.....	167	21.6		50.3	7.2	
Brassieres.....	162	48.1		21.6	3.1	
Bloomers.....	165	12.7	.6	47.3	23.6	
Drawers and step-ins.....	159	18.2		33.3	3.8	
Undershirts and vests.....	161	22.4		46.6	10.6	
Knit union suits.....	140	30.0		2.9	3.6	1.4
Nightgowns.....	169	62.1		28.4	.6	
Pajamas.....	141	29.1		9.9	.7	
Kimonos and negligees.....	160	55.6	1.9	37.5		.6
Bath robes.....	154	80.5	1.3	3.2		5.8
Stockings.....	170	47.6	1.2	50.0	1.2	1.2

There had been a considerable increase in the use of rubberized house aprons during the 5-year period covered by the study, this increase ranging, for the three groups of women reporting, from 3.5 to 7.6 per cent. An increase was also shown in the use of linen for dresses and blouses.

In the case of household articles, cotton was used to a greater extent than any other textile fiber for all articles except doilie sets, luncheon cloths, tablecloths, and napkins, and blankets and rugs.

The report summarizes the findings of the investigation as follows:

"It has been evident during the past few years that women are shifting from cotton to silk or rayon for certain garments. The size of residence community has little influence on the amount of change reported by the single women. In the case of married women, however, the percentage reporting a change from cotton to silk or rayon for most of the garments increases from the farm group through that in cities with a population of 25,000 and under 100,000 and decreases somewhat for the residence group of 100,000 and over.

"Size of income, on the other hand, affects the amount of change from cotton to silk or rayon reported by all the groups of women. With a few exceptions, the percentages of married women, and single women supported by their families, increase in the case of most of the garments from the group with an income of under \$3,000 through the group with an income of \$5,000 and under \$10,000 or \$10,000 and over. A higher percentage of self-supporting single women in the income group of \$3,000 and over reported making this change in the case of some of the garments, whereas the reverse was true for other garments. A comparison among the three classes of women in the same income group reveals the fact that the single women supported by their families made a greater change from cotton to silk or rayon than either married women or self-supporting single women.

"The most important group of factors influencing the change from cotton to silk were reported by all three groups of women to be 'more attractive' and 'laundering.' If the reasons are classified under the general headings, care, style, comfort, and cost, it is found that style was most frequently given in the case of most of the garments by married women and single women supported by their families in the different residence and income groups. Self-supporting single women also listed style more frequently than other reasons, but in some residence or income groups care and comfort were emphasized more than style. Size of residence community, or of income, has no significant effect upon the emphasis placed on the different reasons in the case of any group of women.

"Men have changed from cotton to silk and rayon in the case of socks only, style and comfort being the most important reasons listed for making this change.

"An analysis of the replies of the 646 families as to household articles used during the year ended in the spring of 1927 and the number used five years previous shows that for doilie sets, luncheon cloths, and tablecloths linen was somewhat more popular than cotton, and for table napkins decidedly more popular, and that for blankets and rugs wool was slightly more popular than cotton or other textile fibers. In the case of all other household articles the families reported greater use of cotton than of any other textile fiber.

"Families living in towns or cities of 5,000 and over reported the use of a larger number of certain of the household articles than did those living on farms or in communities of under 5,000 population. Further, where there is a choice between cotton and linen families in the larger cities used a greater proportion of the linen articles than did those living in smaller communities. The same trend is also found in the case of income groups. The families with the higher incomes reported a larger number of articles and a larger proportion of those articles of linen or silk and rayon than did the families with smaller incomes.

"In the comparison of the number of household articles used in 1927 and five years previous among the various textile fibers cotton stands out in the percentage of families reporting that they used the same or a greater number of the different articles in 1927 than in 1922.

"There appears to be no relationship between the increased use of a specified textile fiber in the household articles and size of residence community. Income groups and the proportion of families reporting

an increased use of some of the household articles of different textile fibers show, however, a more positive correlation. For most of the articles where there was a choice of textile fiber the use of linen was increased more than that of cotton by the majority of families in the two highest income groups, and of silk in the highest group, and the use of cotton as much as or more than that of silk or linen by the greatest proportion of families in the lowest or two lowest income groups."

### Statistics on South Carolina Textile Industry, 1908 to 1928

THE very great development of the textile industry in South Carolina in two decades, 1908-1928, is shown in the following table from the yearbook of the department of agriculture, commerce, and industries of that State for 1928:

DEVELOPMENT OF THE TEXTILE INDUSTRY IN SOUTH CAROLINA, 1908 TO 1928

Item	1908	1918	1928
Capital invested.....	\$61, 145, 363	\$98, 503, 198	\$194, 029, 994
Value of product.....	\$66, 971, 307	\$185, 957, 414	\$238, 281, 167
Number of employees.....	46, 885	48, 169	81, 372
Children under 16 years.....	8, 432	3, 100	4, 786
Wages (not salaries).....	\$12, 418, 442	\$28, 276, 212	\$49, 329, 237
Total mill population.....	104, 214		192, 329
Number of spindles.....	3, 846, 117	4, 914, 524	5, 473, 492
Number of looms.....	96, 281	114, 748	129, 538
Number of knitting machines.....	1, 486	693	1, 220
Number of bales cotton consumed.....	765, 966	930, 550	1, 244, 820
Tons of coal consumed.....	429, 309	592, 833	588, 142
Horsepower:			
Water.....	29, 680	37, 003	13, 240
Steam.....	76, 986	69, 011	43, 205
Hydroelectric.....	49, 958	83, 139	165, 288
Steam electricity.....	17, 325	12, 945	25, 435

### Changes in English Industry: "Pooling" and Geographical Distribution

A REPORT from the United States consul general in London, under date of April 30, 1929, contains some discussion of two movements which have been going on in English industry within the last few years. Geographically, industry is moving from the north toward the south of England, and at the same time a process of "pooling of capital" so as to form large combinations is going on.

As to the first, it is reported that there are now 30,000 factories in Greater London, and that on an average at least one new factory a week is being built in the outer suburbs. The same process is going on all through the south and west.

Yeovil, in the west of England, is now the center of many industries; Oxford, St. Albans, Bedford, and Edmonton are other towns transformed by the factory builder. These developments provide concrete instances of two great changes that are taking place in the face of industrial England—the transfer of industry generally from north to south, and its desire to escape from the old crowded manufacturing cities to healthier conditions and cheaper sites.

The extent of the change is reflected in the statistics concerning insured workers. Within the last five years the number of such workers in Greater London and in the southwestern counties has



increased by 10 per cent, in the south Midlands by 7 per cent, and in the southeastern counties by more than 18 per cent. During the same period the increase in northern England has been only 3.5 per cent, and in Scotland 1 per cent, while in Wales there has been an actual decrease.

Unemployment in the new industrial areas is much less than in the northern counties and Wales; in London it is only 5 per cent, in Oxford 2 per cent, and in Slough 1 per cent.

The movement toward combination in order to secure the advantages of larger capital, unified development, and a stronger position as against foreign competition, is illustrated by a plan for the formation of a pottery combine with a capital of £3,000,000 (\$14,599,500), and a project now under discussion for uniting the whole steel industry with a view to its "rationalization." The London Daily Mail is quoted as giving the following summary of what has already been done in the way of combination:

The great industries in which combines have recently been effected range from chemicals to breweries, and include steel, light castings, boots, electrical appliances, cotton, margarine, multiple shops, wireless, cables, and a host of others. Some idea of the capital involved by these arrangements can be gained from the following figures.

	Combined capital	
Imperial Chemical Industries-----	£65, 745, 661	(\$319, 951, 259)
Cables and wireless-----	53, 700, 000	(261, 331, 050)
United Africa-----	13, 000, 000	(63, 264, 500)
Margarine Union }-----	15, 003, 000	(73, 012, 100)
N. V. Margarine Unie }-----		
United Molasses-----	4, 316, 000	(21, 003, 814)
Associated Electrical Industries-----	4, 756, 950	(23, 149, 697)
International Tea Stores-----	2, 950, 000	(10, 195, 318)
Debenham's Limited }-----	10, 810, 000	(52, 606, 865)
Drapery Trust }-----		
Distillers' Co-----	12, 770, 962	(62, 149, 887)
English Steel Corporation-----	7, 641, 000	(37, 184, 927)
Vickers-Armstrong-----	16, 796, 706	(81, 741, 170)
Home and Colonial }-----	9, 621, 959	(46, 825, 263)
Meadow Dairy }-----		
Maypole Dairy }-----		
Lipton }-----		
J. Sears (true form boot) }-----	4, 817, 030	(23, 442, 076)
Freeman, Hardy & Willis (boots) }-----		
Gilstrap Earp & Co-----	1, 250, 000	(6, 136, 520)
Worthington & Co. }-----	5, 165, 640	(25, 138, 587)
Bass, Ratcliff & Gretton }-----		

### British Restrictions on Imported Labor

THE British Ministry of Labor has recently issued a memorandum<sup>1</sup> defining the practice of the Government in regard to the entry of foreigners for employment in Great Britain. Under an order of 1920 relating to the admission of aliens, a foreigner is not permitted to come in for the purpose of entering the service of an employer in the United Kingdom without a permit in writing for his engagement issued to the employer by the Minister of Labor. In view of the

<sup>1</sup> Great Britain. Ministry of Labour. Procedure regulating the entry of foreigners for employment in Great Britain (Aliens order 1920, Article I (3) (b). London, 1929. (Cmd. 3318.)

extent of unemployment in Great Britain, this right of entry is closely guarded. In general, an employer applying for a permit must first give a guaranty that no labor now employed will be displaced by the newcomers, and, second, must prove that he has been unable to find suitable labor among those already in the country, and also that the wages to be paid to the foreigners are not less than those usually paid to British employees for similar work. Permits are not issued for the purpose of bringing in labor to meet a seasonal demand, such as to increase the supply of milliners during the season or of agricultural workers during harvest time. Permits are usually issued for only a limited period of time.

In the case of entertainers, the practice is to issue permits freely, except for the time limitation, to performers of international reputation, and for performances presenting special features of novelty or attractiveness. In regard to foreign musicians specializing in dance music, there has been so much complaint that they are superseding British musicians that the conditions for admittance are somewhat onerous. Examples are given as follows:

If the employer desires to bring in a complete band to play for dancing, he is required to engage, or to continue to engage, a British band equal in size to the alien band. If it is proposed to augment a British dance band by the introduction of alien musicians of outstanding ability, such introduction may be permitted up to about 25 per cent, on condition that no British player is discharged to make room for the aliens.

In regard to waiters and hairdressers, two classes who were formerly largely recruited from among foreigners, it is the policy of the ministry to refuse permits, with the result that training for both occupations is now being given in Great Britain. For waiters, to whom foreign experience and a knowledge of one or more foreign languages are highly important, a regular system of exchange has been arranged by the ministry as between British trainees seeking experience in France and Switzerland, and French and Swiss youth desiring British experience. Permits are also issued to promote these exchanges in respect of other continental countries.

The ministry usually allows the introduction of foreign technicians to assist employers in establishing new industries, but in all such cases the permit is limited as to time, and is made conditional upon the expert's devoting part of his time to the training of British subjects in his particular line. This method of advancing British training has been used in connection with the beet-sugar industry and the manufacture of artificial silk and motor tires.

Permits are usually issued for young foreigners, male or female, who desire to take minor positions in banks, offices, and the like, with a view to obtaining some knowledge of the English language and English business methods, as it is felt that such persons are a valuable link later on in life for the furtherance of British export trade. Care is taken, however, to see that the plan is not misused by employers who are merely desirous of obtaining cheap clerical labor.

# PRODUCTIVITY OF LABOR

## Productivity of Labor in Water Transportation in the United States, 1916 to 1926

THE fifth census of water transportation in the United States<sup>1</sup> affords some interesting comparisons of labor productivity in 1916 and 1926 for the employees on United States vessels.

In 1926 the number of employees on all vessels was 204,393, as compared with 178,593 in 1916. The distribution of employees by type of vessel is shown in Table 1. The term "employees" includes both officers and crews, and is the number ordinarily required for the operation of the vessels.

TABLE 1.—NUMBER OF EMPLOYEES ON UNITED STATES VESSELS CLASSED BY SERVICE OF VESSELS, 1916 AND 1926

Year	Freight and passenger vessels	Tugs and other towing vessels	Ferry-boats	Fishing vessels	Yachts, over 15 gross tons	All other vessels
1916	105,556	23,476	4,435	26,068	6,089	12,969
1926	135,725	19,577	4,603	27,700	7,750	9,038
Per cent of increase	28.6	<sup>1</sup> 16.6	3.8	6.3	27.3	<sup>1</sup> 30.3
Average number of employees per vessel:						
1916	4.1	6.4	5.2	4.9	3.7	3.9
1926	5.5	6.7	4.0	5.2	4.5	4.7

<sup>1</sup> Decrease.

The principal increase in numbers employed during the 10 years was among employees in the largest group, freight and passenger vessels; these in 1926 employed more than two-thirds of the total workers on all vessels. There was a decrease in two of the smaller groups, tugs and other towing vessels and vessels in miscellaneous service, due to a large reduction in the number of vessels in both of them.

Comparative figures are presented in Table 2 for the two years, showing the number of vessels, the gross tonnage of the vessels, the number of employees, the number of passengers carried, and tons (2,000 pounds) of freight carried.

TABLE 2.—TRANSPORTATION OF PASSENGERS AND FREIGHT ON UNITED STATES VESSELS IN 1916 AND 1926

Year	Number of vessels	Combined size of vessels (gross tons)	Number employed on vessels	Number of passengers carried	Tons of freight carried
1916	40,383	12,371,269	178,593	331,589,338	258,082,659
1926	37,549	18,355,837	204,393	478,019,944	448,052,555
Per cent of increase	* 7.0	48.4	14.4	44.2	73.6

\* Decrease.

<sup>1</sup> U. S. Bureau of the Census. Water Transportation, 1926. Washington, 1929.



While there was a 7 per cent reduction in the number of vessels during the 10 years, the gross tonnage of the entire fleet increased nearly 50 per cent, showing a tendency toward larger vessels. The number of employees had increased 14.4 per cent, but the number of passengers transported showed an increase of 44.2 per cent, and the amount of freight carried showed an increase of 73.6 per cent.

Consequently there was a larger number of passengers carried per employee in 1926 than in 1916, and also a larger amount of freight per employee, giving a decided increase in labor productivity. This is seen in Table 3, which contains averages for these items.

TABLE 3.—RELATION OF EMPLOYEES TO VESSELS AND TO PASSENGERS AND FREIGHT TRANSPORTED, 1916 AND 1926

Year	Em- ployees per vessel	Gross ton- nage per employee	Passengers per employee	Tons of freight per employee
1916	4.4	69.3	1,856.7	1,445.1
1926	5.4	89.8	2,338.7	2,192.1
Per cent of increase	22.7	29.6	26.0	51.7

As the average size of the vessels had increased, more employees were required per vessel, but relatively less than the increase in tonnage. In 1926 the number of passengers per employee had increased 26 per cent over the number for 1916, and 51.7 per cent more freight was carried per employee, a very substantial increase in productivity for the decade.

## WOMEN IN INDUSTRY

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Reports giving both the actual hours worked and the scheduled hours were received from 239 firms employing 16,726 women, and from these it appears that for 73.6 per cent of the women the actual daily hours and the scheduled daily hours were the same, while 14.2 per cent worked overtime and 12.3 per cent undertime.

The April issue of the Labor Bulletin contains a further study, giving a comparison between the working hours of the men and the women in the 273 plants for which the scheduled hours were reported. Of the 19,367 women employed, 15,927, or 82.2 per cent, had the same hours as the men; 355, or 1.8 per cent, had longer hours; and 3,080, or 15.9 per cent, had shorter hours. For 5 the facts were not reported. Of the women having the same scheduled hours as the men, 27.9 per

ent had a day of 8 hours, 28 per cent had over 8 and under 9 hours, 28.7 per cent had 9 hours, 4.6 per cent had over 9 and under 10 hours, and 10.8 per cent had 10 hours. Of the women working shorter hours than men, 59.8 per cent had a scheduled day of 8 hours, 21 per cent had over 8 but under 9 hours, and 18 per cent had 9 hours.

More than 89 per cent of the women working the same daily hours as men worked less than 10 hours a day, and most of them worked 9 hours or less. This shows that in these cases the women's 10-hour law had no conceivable effect on the working hours of women. In the remaining 10.8 per cent of these

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women who may be employed underground to the total number of persons employed is to be limited in accordance with a sliding scale which begins at 29 per cent for the coal mines and 40 per cent for the salt mines, and proceeds by a progressive annual reduction to complete abolition as from July 1, 1939, when the written authority of the chief inspector will be required for any departure from the prohibition.

The underground employment of women will thus be curtailed at the rate of 10 per cent per annum, and the industry will be given 10 years in which to adapt itself to the displacement of over one-fourth of its underground workers and one-ninth of its total labor force.



# WOMEN IN INDUSTRY

## Women's Working Hours in Illinois

THE Illinois Labor Department in its Labor Bulletin for February, 1929, presented some figures concerning the working hours of women in Illinois factories. The statistics were gathered as a part of the regular employment figures for November, 1928, and covered the pay-roll period including November 15. The questions called for facts as to the actual operating hours and the regular or scheduled hours per day and per week, by sex of worker. Some of the reporting firms do not make any distinction of sex on their records, and some, though reporting by sex, answered indefinitely or inadequately, so that the data obtained did not cover the whole field. Four hundred and two establishments, employing 24,261 women, reported the actual hours worked, by sex of worker, and 273 plants, employing 19,367 women, gave the scheduled hours. The Illinois law permits a 10-hour working-day for women; but in the plants reporting, the hours rarely came up to this limit. The actual hours worked and the percentage of the 24,261 women found in each hour group were as follows:

Actual daily working hours:	Percentage of women working these hours
8 hours or less-----	29.6
Over 8 and under 9 hours-----	27.0
9 hours-----	31.8
Over 9 and under 10 hours-----	3.0
10 hours-----	8.6

It will be seen that approximately one-twelfth worked the permitted 10 hours a day as against very nearly three-tenths who worked 8 hours or less.

The distribution by regular or scheduled hours of 273 factories showed almost exactly the same proportion in the two highest hours groups—respectively 3.9 per cent and 8.9 per cent—with 32.6 per cent with scheduled hours of 8 or fewer a day, 28.2 per cent having over 8 and under 9 hours, and 26.4 per cent having 9 hours.

Reports giving both the actual hours worked and the scheduled hours were received from 239 firms employing 16,726 women, and from these it appears that for 73.6 per cent of the women the actual daily hours and the scheduled daily hours were the same, while 14.2 per cent worked overtime and 12.3 per cent undertime.

The April issue of the Labor Bulletin contains a further study, giving a comparison between the working hours of the men and the women in the 273 plants for which the scheduled hours were reported. Of the 19,367 women employed, 15,927, or 82.2 per cent, had the same hours as the men; 355, or 1.8 per cent, had longer hours; and 3,080, or 15.9 per cent, had shorter hours. For 5 the facts were not reported. Of the women having the same scheduled hours as the men, 27.9 per

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More than 89 per cent of the women working the same daily hours as men worked less than 10 hours a day, and most of them worked 9 hours or less. This shows that in these cases the women's 10-hour law had no conceivable effect on the hours of either men or women. In the remaining 10.8 per cent of these instances, however, it is possible, though not proved, that the 10-hour law had a limiting effect upon the hours of both sexes.

Since no woman who had shorter daily hours than men worked as long as 10 hours, which would be permitted by law, and since the large majority of them worked less than 9 hours, no contention can be made that the women's 10-hour law has put these women at a disadvantage in comparison with men. The reasons for the women's shorter hours in these cases must be sought in other directions.

### Women in the Mines of India

INDUSTRIAL and Labor Information, the official organ of the International Labor Office at Geneva, gives in its issue for April 15, 1929, a summary of the situation as regards the underground employment of women in the mines of India.

According to official figures, the mining industry in British India employs 70,000 workers, of whom 87,000 men and 32,000 women are employed in underground workings. For several years past the Government has been desirous of putting an end to the underground work of women. So long ago as 1922 a joint committee of the two houses of the legislature recommended its abolition after a period of grace of five years. It was not found practicable, however, to accept that recommendation. By way of compromise, a provision was inserted in the mines act of 1923 (which gave effect, so far as the mining industry is concerned, to the conventions concerning hours of work, the minimum age for child labor, and the weekly rest day), whereby the Government was empowered to make regulations for prohibiting, restricting, or regulating the employment of women in mines.

It is in the exercise of this power that, in spite of difficulties arising from the opposition not only of mine owners but of the underground women workers themselves, the Government has now taken steps for the elimination of women's work below ground. Under the regulations just promulgated, as from July 1, next no woman may enter or remain in the underground workings of any mine other than an "exempted" mine, without the written authority of the chief inspector of mines. "Exempted" mines are the coal mines of Bengal, Bihar and Orissa, and the Central Provinces, and the salt mines of the Punjab. For these mines (which, in 1926 employed on a daily average 28,615 women below ground), failing the consent in writing of the chief inspector, the percentage of women who may be employed underground to the total number of persons employed is to be limited in accordance with a sliding scale which begins at 29 per cent for the coal mines and 40 per cent for the salt mines, and proceeds by a progressive annual reduction to complete abolition as from July 1, 1939, when the written authority of the chief inspector will be required for any departure from the prohibition.

The underground employment of women will thus be curtailed at the rate of 10 per cent per annum, and the industry will be given 10 years in which to adapt itself to the displacement of over one-fourth of its underground workers and one-ninth of its total labor force.

## CHILD LABOR

### Children Employed in Maryland Fields and Canneries

THE Maryland commissioner of labor and statistics has recently published two studies dealing with children of migrant families employed as pickers of fruits and vegetables, on the farms of Anne Arundel County, and as helpers in the canneries of four other counties, during parts of the summer of 1928.<sup>1</sup> The children employed in the field work were mostly Poles whose families had come from Baltimore for the seasonal work of picking, which would last for 8 or 10 weeks. The family groups, in this case, included very few men, or children over 16; all such who had a job were holding on to it, and only those who were unemployed or who could not get work in the city migrated to the country. Some 262 families were found, including 1,255 individuals, of whom approximately 800 were children aged from three weeks to 16 years. About 560 children were employed in the picking. Hours were irregular, and earnings—all piecework—variable, being affected by the weather, condition of the crop, and other factors. Within the last few years, it is said, the farmers have become reluctant to employ young children, thinking they are too destructive to the crop; some refuse to take on children under 8, and others place the age limit several years higher. The work is entirely unskilled, so that young children can be employed, if the bosses and the parents wish.

The canneries, at the time the study was made, were working on tomatoes, and presented the conditions of heat, sloppiness, and discomfort made familiar by earlier investigations. Of the total group of 289 visited, 180 employed children under 16, and in these 976 children, 577 white and 399 colored, were working. In the plants of which a special study was made, the migratory workers, with the exception of one group of Poles from Baltimore, were all colored people secured from Baltimore and various parts of Maryland, Virginia, and Delaware.

In the field work and the canneries alike the most serious features, so far as the children are concerned, are the interruption to school attendance, and the insanitary living conditions to which many of them are subjected. As to the first point, many of the migratory families go to the fields by the middle or later part of May, taking the children from school some weeks before the term is finished. Not infrequently the same families stay on for work in the canneries, which means keeping the children from school for some weeks after it opens in the fall. This interference affects not only the children old enough to work, but all of the family group. A study of 220 children, aged 11 to 15 inclusive, found working in 34 canneries, showed that many of them were retarded, some very considerably.

<sup>1</sup> Maryland. Board of Labor and Statistics. Berry and vegetable pickers in Maryland fields. Child labor in vegetable canneries in Maryland. [Baltimore], 1929.



Presumably the same situation would be found to exist among the younger children of these families, who were not working, but none the less were kept from school by the family migrations.

The living conditions were generally bad, the water supply poor, and the sanitary arrangements disgusting. Overcrowding was universal.

Housed, generally, in unpainted wooden shacks, sometimes of one floor, sometimes of two, these workers, largely from the congested sections of the city, perhaps, are required to pass the time when they are not in the fields in almost unbelievably crowded conditions. The sleeping quarters consist, without exception, of bunks built flat on the floor and formed by piling straw within the confines of boarding about 15 inches high. Almost without exception it was found that each of these bunks, covered by whatever bed covers the workers had provided for themselves, was shared by the members of the entire family group, regardless of number of individuals, age or sex \* \* \*. Although it was found in some instances that the families had made an effort to secure some privacy by hanging curtains between the bunks, frequently a number of families were found housed in a single room without partitions of any kind.

On two farms, shacks were found consisting of a long, low building divided into small rooms, "each of which contained enough space for the customary family bunk and sufficient additional room perhaps for the family clothing." This at least provided privacy for the family group, although it allowed none within that group.

In the camps connected with the canneries, conditions were somewhat better, since there the shacks ordinarily consisted of a series of small rooms, one of which was usually assigned to a family. One stone building was found in which a series of rooms had been constructed along each side of a central hall; the doors were provided with locks and the windows were screened. Such conditions were unusual.

#### Illegally Employed Minor Covered by Compensation Act in Massachusetts

THE Supreme Judicial Court of Massachusetts on June 1, 1929, handed down an opinion affirming an award of compensation in favor of the dependents of an illegally employed minor fatally burned as the result of an accident in the fireworks factory in which he was employed.

Cecil J. Pierce, a minor under the age of 18 years, at or about 8.30 a. m. on January 30, 1928, while employed by the National Fireworks Co. and while carrying a tub of sparkler mixture which was to be reworked in the manufacture of fireworks, had just arrived in the mixing room when an aluminum-dust explosion occurred in which he was fatally burned. The father of the boy filed a claim for an award of compensation on April 16, 1928. The insurer of the employer contended that the workmen's compensation act was not intended to apply to minors illegally employed; and that a parent, whose minor child, illegally employed, is killed as a result of such employment, is not entitled to compensation under the workmen's compensation act. Chapter 149, section 62, paragraph (11) of the Massachusetts General Laws, provides that: "No person shall employ a minor under 18 or permit him to work \* \* \* in or about establishments wherein gunpowder, nitroglycerin, dynamite, or other high or dan-

gerous explosive is manufactured or compounded." Section 78 provides a penalty for the violation of section 62, as well as for other sections contained in chapter 149. Section 24 of the rules and regulations of the Massachusetts department of public safety provides that "no person under the age of 18 years shall be employed in a fireworks manufactory unless accompanied at all times by some authorized adult person."

An award was made in favor of the father of the deceased and the case was taken on appeal to the supreme court of the State. That court affirmed the award. The court pointed out that section 62 does not forbid minors under 18 years of age from engaging in the employment described in section 62, paragraph 11, above quoted, but does provide that "no person shall employ a minor under 18"; and that section 78 does not impose a penalty upon a minor so employed or upon the parent of such minor, but does impose a penalty upon a person who shall employ a minor in violation of section 62. At common law before the adoption of the workmen's compensation act in 1911 a minor employed in violation of a statute passed for his protection, while at work was not acting illegally unless that statute expressly forbade his undertaking that employment. "The violation of such a statute could not be used as a shield to an action at law by an employee to recover damages for a breach of duty imposed on the employer by the common law, nor would such illegal employment be a defense to an action by the minor employee to enforce a contractual agreement for fixed wages." The court said that it could not "perceive any reason to differentiate between those who are lawfully employed and those employed as a consequence of the employer's illegal conduct. In both instances the minors are free from statutory inhibitions; their contracts as to themselves are free from the taint of illegality; in each case they are entitled to similar benefits and to an equivalent amount of protection. The parties were possessed of capacity to establish the relation of master and servant notwithstanding the contrary obligation which the statute imposed upon the employer. The contract is not of that type which is wholly void and from which no enforceable rights can arise. [Cases cited.] The violation of the statute subjects the employer to the penalties mentioned in the statute; but it does not prevent the relation of employee and employer from coming into existence nor affect the rights incident to that status which accrue to an employee who himself is free from wrongdoing. The purpose of the statute is to affect only public obligation and to confer no private rights."

The court held that the numerous cases cited by the insurer in support of its contentions in most instances were not applicable for the reason that the definition of the word "employee" excludes minors. The court accepted "as the better view, because more in harmony with the broad purpose of the legislature in the enactment of the compensation law, the reasoning of the judgments in *Noreen v. William Vogel & Bros. (Inc.)*, 213 N. Y. 317; *Humphrees v. Boxley Bros. Co.*, 146 Va. 91; and *Ressi v. Howard Mfg. Co.*, 109 Wash. 524."



## RECREATION

### Community Recreation in the United States in 1928

THE progress made by the community recreation movement in 1928 is shown by reports <sup>1</sup> from 872 cities conducting community recreation programs and facilities under leadership during the year. This is an increase of 57 over the number of cities reporting in 1927, the largest previous year.

During 1928, 1,113 recreation areas or other facilities were opened for the first time. The number of employed workers reported by 773 cities was 20,762 and the salaries and wages of these workers, which amounted to more than \$12,500,000, was almost 50 per cent greater than reported for the previous year. A total of 2,783 full-time, year-round workers was reported by 281 cities, fewer volunteer leaders being reported than ever before.

Separate play areas under trained leadership numbered 12,159, and there were 4,866 baseball fields and athletic fields, 353 bathing beaches, 267 golf courses, 66 stadiums, 114 summer camps, 323 indoor and 614 outdoor swimming pools, and 7,186 tennis courts reported. Community houses used for recreation purposes were reported by 157 cities. According to the cities reporting there was an average daily attendance of about 1,017,000 at the outdoor playgrounds and the participants for the season at the bathing beaches and outdoor swimming pools numbered more than 34,000,000. Thirty-one cities reported a total of 239 streets closed for play, and 19 cities reported an average daily attendance of nearly 12,000 at these street play areas.

The majority of the recreation programs are managed by municipal recreation commissions, departments, or boards; in a few instances municipal and private authorities combined in the management of the playgrounds and community centers; and in 300 cities private organizations maintained all or part of the recreation activities.

Approximately 90 per cent of the money expended for community recreation programs in 1928 came from municipal sources, while of the remaining 10 per cent practically twice as much money came from fees and charges for the use of facilities as from private sources. The total expenditures for public recreation as reported by 817 cities, amounted to approximately \$31,740,850.

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<sup>1</sup> The Playground, New York, May, 1929.



# HEALTH AND INDUSTRIAL HYGIENE

## Sickness Among Industrial Employees

**T**HE frequency of cases of disabling sickness among industrial workers is shown by studies carried on regularly by the United States Public Health Service. The most recent report<sup>1</sup> records the number and cause of disabilities—both sickness and nonindustrial accidents—for which sick benefits have been paid during the 7-year period 1921-1927.

The reports are now furnished to the Public Health Service by a group of about 35 industrial sick-benefit associations and company relief departments, although only 15 funds reported continuously throughout the major part of the period. The data cover disabling sickness and nonindustrial accidents lasting eight days or longer, but the reports must be regarded as an understatement of the extent of disabling sickness since most of the associations reporting refuse benefits for certain diseases or for incapacity resulting from the violation of any civil law or from willful or gross negligence. A number of associations, also, do not pay for chronic diseases contracted before joining the association nor for disabilities resulting from specific physical defects. The importance of the respiratory diseases as a cause of disablement is shown by the fact that 41.8 per cent of the total claims during the 7-year period were paid for these diseases, about half of the respiratory cases being reported as influenza or grippe. The digestive diseases were the second most important group, accounting for 13.7 per cent of the cases, and nonindustrial accidents made up the third largest group, causing 10 per cent of the claims. These three groups, therefore, account for approximately two-thirds of all the cases of disability. The other groups of disabling diseases in the order of their importance were the circulatory-urinary diseases, rheumatism, diseases of the nervous system, diseases of the skin, diseases of the organs of locomotion, and the epidemic and endemic diseases. These diseases, together accounted for 26.6 per cent of the cases while the remainder, 7.9 per cent, were due to a variety of causes.

In general the figures show that the frequency of sickness is increasing as the incidence rates for both the respiratory and the nonrespiratory groups of diseases have increased during the period under review. The respiratory rate is largely determined by the frequency of influenza and grippe, which have shown a general upward trend. The other respiratory diseases, with the possible exception of diseases of the pharynx and tonsils, have not shown any decided change in the frequency rate over the 7-year period. The increase in the rate of disability from external causes is considered to be due to the steady advance in the number of automobile accidents. In the nonrespira-

<sup>1</sup> United States Public Health Service. Public Health Reports, Feb. 22, 1929, pp. 387-403: Sickness Among Industrial Employees.

tory groups of diseases, the digestive and the circulatory-genitourinary groups showed the greatest increase in the rate of claims for sickness benefits.

The frequency rates for the 15 funds which reported continuously throughout the period 1922-1927 were compared for the 3-year periods ending December 31, 1924, and December 31, 1927. The figures show that in the latter period there were fewer cases lasting from 8 to 20 days than in the earlier period but that there were more cases lasting 8 weeks or longer, showing that no appreciable progress had been made during the six years in reducing the amount of serious sickness among the membership of these associations.

The sickness frequency for the 8-day or longer disabilities was found to be 50 per cent higher among the female than among the male employees and this in spite of the fact that the age factor is favorable to women in industry since a larger proportion of men than of women is usually found in the older age groups. The sickness rates for the reporting associations exclude nearly all diseases which are not common to both sexes.

The sickness rate in certain industries was also studied. In the iron and steel industry the disability-frequency rates were in general lower than among a group of employees in public utilities and those in a group of miscellaneous industries. The rates were especially low among the steel workers for neurasthenia, the digestive diseases, bronchitis, influenza, and gripe, which is in part accounted for by the fact that the heavy nature of the work in the steel industry causes a selective recruitment of individuals of more than average physical endowment. The rates among the steel workers were especially high, however, for pneumonia and a special study is in progress to determine the reason for the existence of a pneumonia problem in this industry.

The seasonal incidence of sickness is shown by the study to be due in large part to influenza and gripe. In epidemic years the peak of the influenza epidemic has been reached in February or March but even in the nonepidemic years there is a considerable increase in the amount of sickness in the winter caused by the respiratory diseases. The nonrespiratory diseases while showing less marked seasonal variation also show a tendency to occur more frequently in the winter and early spring than in the summer and autumn months.

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### Silicosis Among Rock Drillers, Blasters, and Excavators in New York City

A CONSIDERABLE amount of rock excavation is being carried on in New York City at all times and the continual extension of the subway and tunnel systems means that an increasing number of workers are being exposed to the hazard of high concentrations of silica dust. As a result of the realization of the probable increase in this hazard, a committee representing various groups interested in the health problems of industrial workers was organized for the purpose of making a scientific study of the subject.<sup>1</sup>

<sup>1</sup> The Journal of Industrial Hygiene, February, 1929, pp. 37-81: Silicosis Among Rock Drillers, Blasters, and Excavators in New York City, Based on a Study of 208 Examinations.



Much interest in the study was evidenced by the employers and by officials of the labor organizations and their members, who were asked to cooperate. It was found that while the workers, especially the rock drillers and blasters, were aware that the work was hazardous, it being the general feeling that long employment would end in tuberculosis, they did not realize that an exposure of even a few years may have permanently injurious effects. It was generally felt by these workers, however, that proper measures for their protection have not been taken.

A number of organizations took part in the study, which included the physical examination of workers and air sampling at work places in order to determine the amount of dust to which the workers were exposed.

The organizations having a part in the study were the Industrial Department of the Institute of Public Health of Columbia University, the New York Tuberculosis and Health Association, and the Laboratory of Industrial Hygiene of the Metropolitan Life Insurance Co. The medical report was prepared by Dr. Adelaide Ross Smith and the conclusions and recommendations by the silicosis committee.

#### Extent of Silicosis Among Excavation Workers

SILICOSIS is a fibrosis of the lungs caused by the inhalation of dust containing free silica. The disease may occur in many industries but is especially prevalent in hard rock metal mining, granite cutting, metal grinding, and sand blasting. The changes which occur in the lung in silicosis are believed to be due to a blocking of the lung lymphatics by dust laden mononuclear cells and to the action of colloidal silica, the exact nature of the action of the colloidal silica being in doubt. The disease develops slowly, with practically no symptoms in the early stages but later there is increasingly labored breathing which leads to eventual disability. Cough and pain in the chest may also be present. The disease is frequently associated with tuberculosis, investigations in different industries offering exposure to silica dust having shown a high rate of tuberculosis among such workers. This association of silicosis with tuberculosis and the fact that large numbers of workers are employed in trades in which there is exposure to silica dust makes silicosis one of the important industrial diseases.

Radiographic examinations of the chest offer the only means of diagnosing the disease with certainty, as the physical signs in the lungs do not differentiate it from other respiratory diseases. Silicosis tends to progress and it is considered that there may be progression after removal from exposure even in comparatively early stages of the disease. One writer, according to a recent study of miner's phthisis in South Africa, believes that progression in the disease after exposure has ceased is due to an infective element which may or may not be tuberculous.

#### Results of Physical and Radiographic Examinations

IN THE STUDY 230 men were examined and X rayed but the lung films were unsatisfactory in 22 cases so that the number finally selected for complete study was 208. Of this number, 90, or 43 per



cent, of the lung radiograms were negative for silicosis, and 118, or 57 per cent, showed evidence of it. For the study a classification of cases based solely on the X-ray findings without regard to symptoms was accepted, which recognizes an antepimary stage in which the pictures show a slight increase in density in the center of the lungs, and three later stages. In the first of these stages there is definite increase in the shadows, which is similar to chronic bronchitis or asthma; the second stage shows a mottling throughout both lungs; and in the third stage these mottled areas have coalesced so that there are large sections of massive fibrosis, or the fibrosis may be diffused with larger or smaller nodules still present. Of the 118 who showed evidence of silicosis, 47 were in the antepimary stage, 39 were in the first stage, 15 in the second stage, and 10 in the third stage. In seven other cases the X-ray pictures showed that in addition to the changes characteristic of the antepimary stage, changes indicative of the third stage were also present.

The exposure of the men to the siliceous dust was less than 10 years in 76 cases, the range of employment being from 6 weeks to 46 years. These periods do not represent continuous exposure, however, but include in many cases considerable periods of unemployment. The earliest appearance of the disease in the different groups ranged from one to nine years of exposure.

In regard to occupation, the incidence of the disease was found to be highest among blasters and lowest among excavators, but the blasters as a group had a history of longer exposure than the other groups. Eighty-one per cent of the blasters were silicotic, 59 per cent of the drillers, and 43 per cent of the excavators. While it would appear, therefore, that blasting is a more hazardous occupation than drilling, the difference in the exposure periods is such that it can not be definitely concluded that this is the case.

The majority of the drillers had, according to their own statements, worked in hard rock only, while a majority also had used a dry drill. The type of excavation work had included ordinary open excavating such as precedes building construction, tunnel excavation, and "cut and cover" work such as is used in subway construction where the cut is covered with boards.

It was not found possible to relate the incidence of silicosis closely to the type of work since many of the workers had been engaged in more than one type of operation. The incidence of the disease was found to be less, however, among a group who had been engaged only in open excavating than among those who had done one or more of the other types of work.

The physical examinations showed various conditions which were more or less related to the silicosis hazard. Thus, chest expansion even in the group which was negative for the disease was generally less than normal. Tests of the respiratory rate, both before and after exercise, showed more rapid breathing after exercise in about 15 per cent of the negative, antepimary, and first-stage groups, while dyspnea (labored breathing) was present to some extent in the second and third stage groups.

Seven per cent of the men were found to have chronic conjunctivitis, probably due to the dust, and 48 per cent had some impairment of hearing resulting in large part probably from the noise of pneu-

matic drills and blasting, 70 per cent of those showing second and third stage silicosis being partially deaf.

Twenty-two men, or 10 per cent of those examined, were found to have some form of heart disease. Six of these were cases of chronic myocarditis (inflammation of the muscular tissue of the heart) and it was questioned whether the relatively high rate for this disease was not to some extent due to the fact that advanced silicosis would tend to impede pulmonary circulation, thus throwing an additional burden on the heart. Hardening of the arteries and high blood pressure were also present in a relatively large number of cases but although these were thought to be due in a measure to the silicosis, age was also a factor.

The physical examination of the lungs showed little of diagnostic importance except that there was a higher proportion of cases with râles, diminished breath sounds, and diminished resonance among the groups in the second and third stages of silicosis than among the others. The lungs were entirely negative in between 40 and 50 per cent of cases in all groups except the third and even in that group no physical signs were evident in about one-quarter of the number of men examined.

The diagnosis of tuberculosis was made almost entirely by means of the radiographic examinations, as there was not sufficient opportunity for satisfactory clinical study, and specimens of sputum were difficult to obtain. It is considered probable, therefore, that some cases were overlooked. In the series of 208 chest films 7 were found which appeared to have active tuberculous lesions, 3 of these cases showing physical signs strongly suggestive of tuberculosis while 2 were doubtful and 2 were negative.

Summing up the results of the study, it was found that "ante-primary silicosis was found to be present in conspicuous proportions after 5 years' exposure to rock dust; first stage silicosis after 10 years' exposure; and second and third stage silicosis after 20 years' exposure. Second and third stage silicosis was associated to a noticeable degree with a past history of pleurisy and pneumonia." From these findings it was concluded that silicosis constitutes a serious health hazard to the workers employed in blasting, drilling, and excavating in New York City.

The analyses of the rock dusts to which these workers were exposed showed that the free silica contents of the dusts were relatively high and that the smaller particles, which are more harmful, predominated. The results of the air analyses showed, therefore, that rock drillers in New York City are exposed to dust which both in silica content and in number and size of particles is dangerous to health.

The silicosis committee, which framed its report following these detailed studies of actual working conditions and of the physical effects of the work, point out the importance of reform in conditions of employment, since, in addition to the ever-increasing excavation in the siliceous rock of Manhattan and the Bronx for subways, tunnels, and tall buildings, contracts have been let for the construction, at a depth of 500 feet, of a water tunnel 20 miles in length, on which over 5,000 men will be employed during a period of six years.

The study showed that the substitution of wet drilling for dry drilling will not entirely eliminate the hazard of silicosis, although it



is an important measure of protection. Ventilation is also important, but dust-removal systems have not yet proved practicable. The committee is strongly in favor of including silicosis in the compensable diseases, as the recognition of this condition as an occupational disease, the report states, "will do much toward early recognition of the condition and improvement in the methods of combating the disease."

### Effect of Repeated Daily Exposure to Small Amounts of Automobile Exhaust Gas

THE effect of daily exposure to automobile exhaust gas was made the subject of experimental study by the United States Bureau of Mines in cooperation with the bridge and tunnel commissions of the States of New Jersey and New York.<sup>1</sup> The purpose of the study was to determine the effect of repeated daily exposures to the gas on traffic officers and maintenance men in the Holland Vehicular Tunnel but the information is of general interest in view of the widespread hazard of exposure to small amounts of carbon monoxide.

The experiments covered the exposure of six men over a period of 68 days to gasoline engine exhaust gas for from four to seven hours daily. The gas-air mixtures to which the men were exposed contained 2, 3, and 4 parts of carbon monoxide per 10,000 parts of air. The following symptoms were found to be present with the subjects at rest or exercising mildly:

1. Exposure to 2 parts of CO in 10,000 caused—
  - (a) In 2 hours, slight but not discomforting symptoms in some subjects.
  - (b) In 3½ to 4 hours, distinct frontal headaches of a discomforting nature in some subjects.
  - (c) In 6½ hours no occipital headaches occurred in any subjects and no symptoms of any kind were experienced in 50 per cent of the exposures.
  - (d) In 3½ to 4½ hours a blood saturation of 20 per cent.
  - (e) In 5 to 6 hours a blood saturation of 25 per cent. Saturation above 25 per cent was attained very slowly.
2. Exposure to 3 parts of CO in 10,000 caused—
  - (a) In less than 2 hours slight symptoms in some subjects.
  - (b) In 2½ to 3 hours distinct frontal headaches in some subjects.
  - (c) After 3 hours a few occipital headaches and cases of vertigo.
  - (d) In 5 hours distinct discomforting symptoms in more than 65 per cent of the subjects.
  - (e) In 2½ to 3½ hours a blood saturation of 20 per cent.
  - (f) In 3 to 4 hours a blood saturation of 25 per cent.
  - (g) In 4 to 4¾ hours a blood saturation of 30 per cent.
3. Exposure to 4 parts of CO in 10,000 caused—
  - (a) In 1½ to 2 hours frontal headaches in some subjects.
  - (b) In 2½ to 3½ hours a few occipital headaches.
  - (c) In 3½ to 4 hours more than 90 per cent had distinct frontal headaches.
  - (d) In 1½ to 2½ hours a blood saturation of 20 per cent.
  - (e) In 2½ to 3½ hours a blood saturation of 25 per cent.
  - (f) In 3 to 4 hours a blood saturation of 30 per cent.

Exercise even in mild form was found to increase the rate of absorption of CO and hastened the appearance of symptoms. CO was found to be eliminated more rapidly, immediately after exposure, if exercise was taken but this is not recommended or advised as a treatment for poisoning by carbon monoxide.

<sup>1</sup> United States Public Health Service. Public Health Reports, May 24, 1929, pp. 1260-1262.



### Dry Ice—A New Industrial Hazard

**T**HE so-called "dry ice" manufactured from carbon dioxide has recently come into rather extensive commercial use, being used by ice-cream plants and dairy-products companies for packing their products and for other industrial purposes where a low temperature is desired.<sup>1</sup>

Dry ice is delivered to the companies using the product in the form of cubes, which are cut into smaller pieces to suit the needs of the user. When delivered, the ice has an estimated temperature of 110° below zero, or about 140° below the temperature of ordinary ice. Warning labels are placed on the containers by packers, but the fact that individuals have handled the ice with bare hands, thereby sustaining serious injuries, makes it important that the hazardous nature of this substance should be recognized.

During the past year five claims were filed with the Industrial Commission of Ohio for injuries resulting from the use of dry ice in the manufacture of golf balls. The ice is used to freeze the core or center of the ball around which the remainder of the ball is constructed, and by the time the cores are ready for winding the estimated temperature is several degrees below zero. In the plant in which the injuries occurred the process involved the removal of each core from the container by the operative, who started the winding by hand, after which the ball was placed in a machine, which completed the winding process.

The symptoms in the five cases reported were practically identical, but varied as to the degree of severity. In each case the nerves of the fingers, hands, and forearms were affected to such an extent that a form of neuritis was produced. There was first twitching or shaking of the arm due to muscle contractions, numbness of the fingers so that the prick of a pin could not be felt, inability to distinguish heat and cold, and sometimes pain and inability to use the hand. Two of the cases were mild, involving 10 and 14 days' disability, respectively, while the others were more prolonged.

It is considered probable that the neuritis was caused by the cold from handling the frozen cores, although the cases are being observed to see if any other factor is involved. In the particular plant in question a device was installed after the occurrence of these cases by which the cores were removed from the containers without touching the surface with the hand. This seems to have eliminated the source of the trouble, as no recent cases have been reported.

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### Employee Medical Service

**A**N INTENSIVE study of the medical services provided in the metal industries has been made by the committee on industrial relations of the National Metal Trades Association and the results of this study, embodying the conclusions of the committee as to the effectiveness of these services, have recently been published.<sup>2</sup> As

<sup>1</sup> Ohio Industrial Commission. *Monitor*, April, 1929, p. 179: Handling of Dry Ice Develops a New Hazard in Ohio Industry.

<sup>2</sup> National Metal Trades Association. *Committee on Industrial Relations. Employee Medical Service*. Chicago, 122 South Michigan Avenue, 1929.

part of the study the shops of a large number of members of the association were visited, in each case the problems in industrial relations of the particular plant being studied as well as the plans, practices, and policies which were in force. Two questionnaires, one relating to workmen's compensation insurance, first aid, and accident prevention, and the other to medical service, costs, and results, were sent out and in addition to the direct information received from these two sources various miscellaneous reports and other data were secured.

Replies as to the character of first aid and medical service rendered were received from 328 companies, considerably over half of whom reported that the medical service was confined strictly to first aid to the injured. One hundred and thirty-three companies reported in addition to the first-aid treatment more or less additional medical care. In 74 cases this included complete treatment to injured employees, while 90 companies give preliminary treatment to sick employees, 10 give sick employees complete treatment, 13 give dental treatment, 32 optical treatment, and 39 X-ray examinations. Eighty-six of these companies give more or less complete physical examinations to new employees. In 46 cases the medical service is extended to the home treatment of employees either on the advice of the visiting nurse or at the request of the employee and in 10 cases it was reported that medical treatment is given to any member of the employees' family. In addition to the direct medical service the medical departments in a number of instances supervise the heating, lighting, ventilation, and general sanitation of the plants, while others carry on active health promotion education and in three cases research work on clinical cases, painting and paint spraying, and atmospherics was reported. The average plant personnel in the 133 plants was 1,272.

Physicians, either full-time or part-time, were employed by 105 companies and graduate nurses by 102 companies, while 32 firms reported regular employment of specialists such as optometrists, oculists, dentists, hygienists, etc.

Complete cost figures of the medical departments were reported by 66 firms with an average of 1,207 employees per company. The total annual cost of the medical service in these plants was \$470,977, or \$5.91 per employee. Nine companies, with an average of 2,583 employees, employing physicians on a full-time basis, reported total annual costs of \$136,554.45, or an average of \$5.87 per employee. Two of these companies reported that part-time doctors also were employed, one company employed 6 full-time nurses, one 2 full-time nurses, and four 1 full-time nurse each.

The cost of medical service of companies employing full-time nurses and part-time doctors was reported by 23 companies having an average of 1,056 employees each. The total annual cost of the medical department in these cases was \$174,885.81, or an average of \$7.20 per employee. Six of these companies employed 1 part-time and 15 full-time nurses, 18 paid the part-time physicians a monthly retainer fee, 4 paid for cases treated only, and 1 paid a monthly salary plus fees for cases treated. The average costs in other groups ranged from \$4.34 per employee in 24 plants employing full-time nurses, and physicians, only as needed, to \$6.33 per employee in 6 smaller plants which employed regularly practical nurses or persons trained in first aid

only but in which doctors and trained nurses were called in when needed.

The salaries paid industrial physicians according to the reports of 54 companies averaged \$4,354.51 per year or \$3.85 per employee, the salary range in nine cases being from \$2,600 to \$8,221. The average cost for 24 companies reporting part-time doctors, whose hours ranged from 2 per week to 4 per day, was \$2,205.58, while the payments by 16 companies who employed physicians only as needed averaged \$8,175.39, or \$11.15 per employee.

Nurses' salaries paid by 57 companies averaged \$1,802.31, or \$1.60 per employee. The salaries and fees paid to dentists averaged \$969.57 per year; to optometrists and oculists, \$424.15; and to other specialists, \$559.72, the number of companies reporting on these points ranging from 7 to 15. The cost of supplies reported by 51 companies was \$864.54 or 75 cents per employee.

The practical results of the operation of medical departments in reduction of accidents, lessening compensation costs, and reducing absenteeism were reported in a number of cases. Eighty-seven companies believed that there had been a considerable reduction in the number of accidents, while the estimates of 10 companies of the accident reduction per 1,000 man-hours worked averaged 43.6 per cent. Thirteen companies estimated the reduction in compensation insurance costs at varying amounts, which averaged 28.7 per cent, and the reduction in absenteeism as a result of the medical work as reported by 15 companies averaged 50.6 per cent.



# INDUSTRIAL ACCIDENTS

## Coke-oven Accidents in the United States, 1927

**A** MARKED reduction in accidents to employees in the coke-manufacturing industry occurred in 1927 as compared with 1926, the death rate for all coke ovens combined having declined 49 per cent and the nonfatal injury rate 30 per cent, according to reports received from manufacturing companies by the United States Bureau of Mines, which has recently published (as Technical Paper 443) its annual report on coke-oven accidents covering the year 1927. The nonfatal injury rate is based on all accidents causing disability for more than the remainder of the day on which the accident occurred. The death rate per thousand 300-day workers was 1.08 in 1927 as compared with a rate of 2.10 in 1926, and the nonfatal injury rate was 55, as against 79 in 1926. The amount of exposure to hazard, based on the number of man-days of employment during the year, was only 4 per cent less than in 1926.

Table 1 shows the number of men employed, the days of labor performed, the actual number of fatalities and injuries, and the fatality and injury rate per thousand 300-day workers, at all coke ovens, in the calendar years 1916 to 1927.

TABLE 1.—NUMBER OF EMPLOYEES, DAYS OF LABOR PERFORMED, FATALITIES, AND INJURIES AT COKE OVENS IN THE UNITED STATES, 1916 TO 1927

Year	Average days ovens were active	Men employed			Number killed		Number injured	
		Actual number	Equivalent in 300-day workers	Days of labor performed	Total	Per 1,000 300-day workers	Total	Per 1,000 300-day workers
1916.....	324	31,603	34,119	10,235,674	45	1.32	5,237	153.49
1917.....	329	32,417	35,595	10,678,429	76	2.14	6,713	188.59
1918.....	329	32,389	35,476	10,642,688	73	2.06	7,792	219.64
1919.....	289	28,741	27,674	8,302,059	53	1.92	4,031	145.66
1920.....	319	28,139	29,921	8,976,214	49	1.64	3,415	114.13
Average <sup>1</sup> .....	319	30,658	32,557	9,767,013	59	1.82	5,438	167.02
1921.....	257	16,204	13,868	4,160,298	17	1.23	1,853	133.62
1922.....	284	19,278	18,236	5,470,939	29	1.59	1,710	93.77
1923.....	324	23,729	25,627	7,688,160	45	1.76	2,593	101.18
1924.....	303	20,451	20,681	6,204,448	24	1.16	1,645	79.54
1925.....	310	23,254	24,054	7,216,239	28	1.16	1,696	70.51
Average <sup>1</sup> .....	299	20,583	20,493	6,148,017	29	1.40	1,899	92.68
1926.....	315	23,115	24,288	7,286,605	51	2.10	1,922	79.13
1927.....	337	20,667	23,223	6,967,035	25	1.08	1,285	55.33

<sup>1</sup> Calculations based on the sum of 5 years rather than on the average of 5 years.

The fatality rate in beehive ovens showed a reduction of 48 per cent and the nonfatal injury rate a reduction of 30 per cent, while the fatality rate for by-product ovens declined 51 per cent and the

nonfatal injury rate 25 per cent. The number of man-days of employment or exposure for beehive ovens was 37 per cent less than in 1926 and for by-product ovens 4 per cent more than in 1926. The report states that much of the reduction in the fatality rate for by-product ovens was due to the fact that they had no major disasters in 1927, whereas a single explosion in 1926 caused the death of 15 men.

The information presented in the report covers 68 companies operating 9,311 by-product ovens and 72 companies operating 13,854 beehive ovens. The number of operating companies, the report states, represents a small degree of duplication, since in cases where a company had ovens in more than one State it was counted for each State in which its ovens were located. The figures do not include plants which were idle the entire year.

Table 2 shows the fatality and injury rates per million hours of exposure in beehive and by-product coke ovens separately, classified by length of shift, for the years 1926 and 1927. About 50 per cent of the men employed at beehive ovens, for which length of shift was reported, worked 8 hours a day and about 40 per cent 9 hours, while a small number of men were employed at ovens where 10 hours constituted a standard day's work. At by-product ovens for which information on length of shift was furnished, 8 hours constituted a standard shift for about 80 per cent of the men and 12 hours for 7 per cent. Reports from some companies indicated 9 or 10 hours a day, although these covered only a few men. The figures in the table show that the 8-hour men had the lower accident rates. At beehive ovens there were 31 accidents per million hours of exposure where the men worked 8 hours a day and 43 where 9 hours were worked. The by-product ovens had a rate of 18 accidents per million hours of exposure for the 8-hour men and 22 for the 12-hour men.

TABLE 2.—FATALITY AND INJURY RATES, PER MILLION HOURS OF EXPOSURE, IN BEEHIVE AND BY-PRODUCT COKE OVENS, BY LENGTH OF SHIFT, 1926 AND 1927

Character of disability	1926			1927		
	8 hours	9 hours	12 hours	8 hours	9 hours	12 hours
<i>Beehive ovens</i>						
Fatal.....	0.783				0.506	
Permanent total disability.....	.196					
Permanent partial disability.....	.979	0.874			.283	
Other serious.....	10.575	18.345		7.602	8.488	
Slight.....	29.960	48.484		23.100	33.670	
Total nonfatal injuries.....	41.710	67.703		30.702	42.441	
Total fatalities and injuries.....	42.493	67.703		30.702	43.007	
<i>By-product ovens</i>						
Fatal.....	1.002		0.619	.363		0.820
Permanent total disability.....	.027					
Permanent partial disability.....	.731		.619	.959		.205
Other serious.....	6.308		3.715	5.182		4.508
Slight.....	14.538		26.004	11.271		16.801
Total nonfatal injuries.....	21.604		30.338	17.412		21.514
Total fatalities and injuries.....	22.606		30.957	17.775		22.334

The causes of coke-oven accidents, with the number killed and injured through each cause, during the years 1922 to 1927, are given in Table 3.

TABLE 3.—PER CENT OF INJURIES IN COKE OVENS, DUE TO EACH CAUSE, 1922 TO 1927

Cause	1922	1923	1924	1925	1926	Average 1922- 1926	1927
<i>Beehive ovens</i>							
Cars, lorries, and motors.....	15.19	12.69	8.97	8.83	12.87	11.90	12.89
Railway cars and locomotives.....	1.05	1.60	1.97	1.41	2.48	1.73	3.83
Coke-drawing machines.....	8.23	5.14	2.85	2.41	2.79	4.31	3.14
Electricity.....	1.48	1.03	1.53	1.40	.62	1.15	1.74
Falls of persons.....	15.61	14.86	14.44	10.04	10.70	13.19	10.80
Hand tools.....	7.17	8.57	7.00	11.65	7.91	8.48	8.01
Suffocation from gases.....			.22			.03	
Burns.....	14.14	11.20	7.22	8.63	8.22	9.97	8.71
Gas explosions.....		.11		.20		.07	.70
Dust explosions.....	.63	.11		.20	.46	.27	
Falling objects.....	12.24	13.72	10.94	15.26	13.80	13.33	11.50
Nails, splinters, etc.....	2.11	3.32	1.10	2.21	4.18	2.78	3.14
Run of coal or coke.....	.42	.11	.22	1.41	1.24	.64	3.83
Other causes.....	21.73	27.54	43.54	36.35	34.73	32.15	31.71
Total.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00
<i>By-product ovens</i>							
Cars, lorries, and motors.....	5.99	6.98	7.58	7.10	5.32	6.60	5.11
Railway cars and locomotives.....	1.21	1.16	1.52	2.09	1.96	1.56	3.01
Coke-drawing machines.....	2.51	2.97	1.60	1.84	1.72	2.19	1.30
Electricity.....	1.45	1.34	1.94	1.34	1.10	1.42	1.70
Falls of persons.....	14.00	16.01	12.79	12.94	15.43	14.39	13.33
Hand tools.....	9.30	10.01	6.99	8.10	7.13	8.43	10.52
Suffocation from gases.....	.65	1.34	1.09	1.08	1.57	1.16	1.90
Burns.....	14.00	16.12	13.97	15.69	12.68	14.60	12.73
Gas explosions.....	1.38	1.34	1.01	.50	4.62	1.77	1.10
Dust explosions.....	.16	.06	.59	1.00	.23	.38	.10
Falling objects.....	13.51	11.70	11.70	12.52	11.12	12.08	14.33
Nails, splinters, etc.....	2.91	2.68	1.94	2.50	3.37	2.69	2.91
Run of coal or coke.....	1.38	1.51	1.09	1.00	1.33	1.28	1.80
Other causes.....	31.55	26.78	36.19	32.30	32.42	31.45	30.16
Total.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00

The report states that records covering the coking industry during recent years seem to indicate that "steady employment or operation exerts a favorable influence upon the safety record of the coke-oven establishments," and also that the largest plants usually have the lowest accident rates, but "regularity of operation, more than size of establishment, appears to be the factor that promotes safety."

### Effectiveness of Plant Safety Organizations in Reducing Accidents

THE Illinois Department of Labor has recently made a study to determine the effectiveness of plant safety organizations in reducing accidents in industrial establishments. The results of the study are published in the March, 1929, issue of the Labor Bulletin of that department.

The report covers the experience of 392 firms having 104,596 employees. Of the 392 firms, 129 had safety organizations and these firms had 69 per cent of the total number of workers. The firms without safety organizations were usually those with the smallest number of employees, 38 per cent of the 263 firms without organiza-



tions having 25 employees or less, 67 per cent not more than 75, and only 25 per cent more than 100 employees. On the other hand, of the 129 firms with organizations, 69 per cent had more than 100 employees and only 31 per cent 100 or less. The report states that of the firms without safety organizations which had over 100 employees each, only 8 had some definite safety program; the others had neither organization nor program. "In general, therefore, it may be said that firms without safety organizations do not have safety programs."

Table 1 shows the number of firms with and the number without safety organizations, and Table 2 the number of such firms with each classified number of employees, while Table 3 gives the number of accidents per 1,000 employees, on an annual basis, in establishments with and those without safety organizations, in the different industry groups.

TABLE 1.—NUMBER OF FIRMS WITH AND OF FIRMS WITHOUT SAFETY ORGANIZATIONS, BY INDUSTRY GROUP

(1) Industry group	Firms with safety organizations	Firms without safety organizations	Total
Stone, clay, and glass	4	13	17
Metals, machinery, and conveyances	54	60	114
Wood products	7	27	34
Furs and leather goods	3	9	12
Chemicals, oils, and paints	12	7	19
Printing and paper goods	9	39	48
Textiles	2	6	8
Clothing and millinery	5	12	17
Food, beverages, and tobacco	14	42	56
Services	1	5	6
Public utilities	7	7	14
Coal mining	6	6	12
Building and contracting	5	30	35
Total	129	263	392

TABLE 2.—NUMBER OF FIRMS WITH AND OF FIRMS WITHOUT SAFETY ORGANIZATIONS, BY INDUSTRY GROUP AND NUMBER OF EMPLOYEES<sup>1</sup>

Industry group	Number of employees and presence of safety organizations																			
	50 or less		51 to 100		101 to 150		151 to 200		201 to 250		251 to 300		301 to 400		401 to 500		501 to 1,000		1,001 and over	
	S.	N.	S.	N.	S.	N.	S.	N.	S.	N.	S.	N.	S.	N.	S.	N.	S.	N.		
Stone, clay, and glass		10		3			3							1						
Metals, machinery, and conveyances	8	32	5	10	6	3	2	5	5	4	3		10	3	3	1	6	1	6	1
Wood products	2	12	1	8	1	4		1		1						3	1			
Furs and leather goods		5		1		2					1				2		1			
Chemicals, oils, and paints	5	4	2	1	1		2								1	1	1	1		
Printing, and paper goods	1	22	1	7	1	3	1	3		2	2		2			1			1	
Textiles	1	2		3												1	1			
Clothing and millinery	1	6	2	1	1	3		1							1				1	
Food, beverages, and tobacco	5	31	1	4	2	2	1	3								2	2	3		
Services	1	3		2																
Public utilities		1			1	1	1	3	1	1		1			1			3		
Coal mining	2	1		2	1			1					1	1		1		1	1	
Building and contracting	3	23		4	1	1							1			1				
All industries	29	152	12	46	15	19	10	17	6	8	5	2	13	4	9	4	15	7	15	4

<sup>1</sup> S. indicates firms with safety organizations. N. indicates firms without safety organizations.

TABLE 3.—ANNUAL ACCIDENT EXPERIENCE, PER 1,000 EMPLOYEES, OF FIRMS WITH AND OF FIRMS WITHOUT SAFETY ORGANIZATIONS, BY INDUSTRY GROUP

Industry group	Firms with safety organizations	Firms without safety organizations	All firms
Stone, clay, and glass.....	30	82	48
Metals, machinery, and conveyances.....	63	94	69
Wood products.....	43	53	52
Furs and leather goods.....	1	37	13
Chemicals, oils, and paints.....	61	35	54
Printing and paper goods.....	23	46	35
Textiles.....	112	7	55
Clothing and millinery.....	3	2	2
Food, beverages, and tobacco.....	65	182	98
Services.....	50	6	1
Public utilities.....	40	87	43
Coal mining.....	169	135	154
Building and contracting.....	144	88	100
All industries.....	58	72	63

The figures show that the annual accident rate per 1,000 employees in establishments having safety organizations was 58 as compared with a rate of 72 in establishments without organizations. In establishments with safety organizations the lowest rates per 1,000 employees occurred in furs and leather goods (1), clothing and millinery (3), and printing and paper goods (23), and the highest in coal mining (169), building and contracting (144), and textiles (112). In establishments without safety organizations, the lowest rates were for clothing and millinery (2), "services" (6), and textiles (7), while the highest rates were for food, beverages, and tobacco (182), coal mining (135), and metals, machinery, and conveyances (94).

The Illinois Department of Labor cautions that in drawing conclusions from the data presented it should be borne in mind that the figures deal with industrial groups and not with industries. For example, the group of metals, machinery, and conveyances includes industries varying widely in the amount of hazard involved in their operations. "Thus, machine shops and foundries as well as watch and clock manufacturing establishments are both included in the group mentioned." It is pointed out, however, that "since this method of classification was applied to all reports no determinable bias was introduced."

In the questions asked in the investigation, the term "safety organization" was not defined, the intention being to let the term apply to any organized method of dealing with industrial accidents. "Such an organization may consist of a safety engineer, a foremen's safety unit, or any other type of administration specifically provided for the purpose."

Attention is also called to the fact that although some of the firms reported their experience on a yearly basis and others for periods of one or more months, the experience of all the firms was reduced to a yearly basis. For example, if a firm reported 3 accidents in one month, the equivalent annual accident experience was considered to be 36.

The conclusion reached by the Illinois Department of Labor as a result of this study is that "although there are one or two industrial groups where the experience of the firms studied does not conform, the preponderance of evidence points to significantly fewer accidents where safety organizations are present. This fact answers the question of the effectiveness and economy of safety protection."

# WORKMEN'S COMPENSATION AND SOCIAL INSURANCE

## Workmen's Compensation in Montana

THE industrial accident board, in its thirteenth annual report, for the 12 months ending June 30, 1928, presents some interesting figures showing the experience of the State of Montana under the workmen's compensation act. Information relating to accident cases and compensation paid therefor, contained in the report, is partly summarized in the following table:

NUMBER OF ACCIDENTS AND AMOUNT OF COMPENSATION PAID, IN MONTANA IN 1927-28, BY CLASS OF INSURANCE

Item	Class of insurance			
	Self	Private	State fund	Total
Number of employers under act, June 30, 1928.....	61	1,547	1,630	3,238
Number of employees, June 30, 1928.....	22,747	14,114	18,720	55,581
Number of accidents involving—				
Deaths.....	58	6	21	85
Permanent total disability.....	5	1	0	6
Permanent partial disability.....	92	26	31	149
Temporary disability over 14 days.....	1,238	384	672	2,294
Temporary disability less than 14 days.....	1,595	1,568	1,321	4,484
Total.....	2,988	1,985	2,045	7,018
Amount disbursed for—				
Funeral expense.....	\$8,363	\$600	\$1,800	\$10,763
Medical expense.....	5,824	42,990	62,435	111,249
Fatal accidents.....	130,275	18,084	63,083	211,441
Permanent total disability.....	19,103	1,394	9,122	29,618
Permanent partial disability.....	59,687	15,195	54,477	129,358
Temporary total disability.....	243,913	40,529	87,760	372,202
Total.....	467,165	118,792	278,676	864,633
Amount of payments in lump sum—				
Fatal cases.....	47,592	9,768	7,789	65,150
Nonfatal cases.....	85,308	21,293	32,213	138,814

## Administrative Order Establishing French Social Insurance Law<sup>1</sup>

THE administrative order regulating the establishment of the social insurance system in France was published in the French Journal Officiel, April 5, 1929. The law,<sup>2</sup> which was passed March 14, 1928, and received official publication April 5, 1928, provided that a general administrative order should be issued within 12 months from the publication of the act, after which a period of 10 months should elapse before the law becomes effective. The administrative order gives minute instructions regarding all administrative details, including regulations governing membership, payment of dues, the constitution and administration of the primary and the departmental funds, and the functions of the different organizations which will have a part in the operation of the law.

<sup>1</sup> La Journée Industrielle, Paris, Apr. 5, 1929, p. 1; Recueil de Droit Commercial et de Droit Social, Paris, March, 1929, p. 87.

<sup>2</sup> See Monthly Labor Review, May, 1928, pp. 79-90.



### Place of the Physician in Sickness Insurance Systems

**A**N ARTICLE by C.-E. A. Winslow, professor of public health, Yale School of Medicine, entitled "Some Reflections on Sickness Insurance in Germany and Austria" published in the *New England Journal of Medicine*, May 30, 1929, gives the impressions of the writer as to the difficulties and also the accomplishments of the sickness insurance systems in those countries. The writer is a member of an international commission appointed by the health organization of the League of Nations to study the relation between health insurance and public-health work in certain European countries and the article was written following a study tour of two and one-half weeks in these two countries.

There are three groups of interests concerned in a sickness insurance system—the wage earners, the physicians, and the community through its concern in the public health. In Germany, for example, the importance of a satisfactory functioning of the system is shown by the fact that 8.5 per cent of the wages of the workers subject to compulsory insurance must be paid into the four insurance systems—sickness, accident, invalidity, and unemployment—while the employers must contribute 5 per cent more.

Both the compulsory and voluntary social insurance systems, one or the other of which is in force in nearly all European countries, are said to have been of enormous value to these countries. While the benefit to the persons insured in such a system is evident, a more difficult problem is presented by the effect of the sickness insurance system upon the work of the physician. The relation of the physician to the insurance fund varies in the different countries and even in some instances within the same country. In England the system of complete freedom of choice has apparently been satisfactory to the medical profession. Under this system any registered physician may place his name on the list of those prepared to serve under the insurance regulations and insured persons may select their own doctors from the list for their own district. In contrast to this are the systems in force in Russia and Yugoslavia where the insured may receive medical care only from the salaried district physicians so that there is no freedom of choice. The insurance systems of Austria and Germany are between these two extremes. Free choice of physicians is the general rule in Germany, although clinics and centers for diagnosis and treatment in which the physicians were on a salary basis were formerly maintained by the insurance funds. These polyclinics in 1927 cared for more than 2,000,000 patients, both in the clinics and in the homes of patients, at about half the cost to the insurance fund that medical care, medicines, supplies, etc., would have amounted to under the system of treatment by private physicians; but the opposition on the part of the doctors, particularly in the cities, was such that an official ruling was made in that year that the polyclinics should no longer treat insured persons. A reduced number of insurance-fund polyclinics are now maintained for the treatment of members of families of the insured so that at the present time while the insured person has free choice and individual treatment by the private physician the wife and children of such a person have the advantage of a less individualized but more scientifically organized service at a well-equipped polyclinic.

In Austria, the manual workers and the majority of the clerical and office workers receive the services of salaried district physicians, for reasons of economy, while the more prosperous funds such as those of the railway workers and public employees have free choice of doctors. Relations between the medical profession and the insurance funds are somewhat better than in Germany, partly because the salaried district physicians are allowed to do outside practice and partly because the physicians as a whole seem to be animated by a desire to be of service to the country in the present economic crisis.

In England and in Germany, the contract by the insurance fund is not made with the individual doctors but with the medical profession of the locality or State as a group. There is always liable to be discontent, the writer says, with any scale of fees which the funds can pay and there is the tendency in any insurance system among the less scrupulous physicians to undertake more cases than can be well cared for, and there is also the tendency to give over-treatment and to lengthen the period during which the worker is certified for disability. In spite of these difficulties, however, the fact remains that sickness insurance provides enormous funds to be used in paying for medical care which would be otherwise unavailable and it also forces the worker whose earnings are small to make provision for medical attention. In Germany the sickness fund amounts to nearly \$80,000,000 and this from a section of the population which in the United States receives largely free medical care.

The insurance funds render at least two distinct services in the public-health field; first, in providing clinics for consultation and special treatment, and second, in the large amount of preventive work they carry on, it having been generally recognized where these systems are in force that it is to the interest of their members to check incipient disease and to raise the general standards of public health.

In regard to the organization of sickness insurance the writer says:

It would seem clear in principle that the organization of the financial resources of persons of small or moderate means by regular contributions of such persons to a common fund helps materially to meet the emergencies of sickness. It would also seem clear that the organization of medical service in some relation to well-equipped hospital and out-patient clinics, makes medical care cheaper and technically more efficient.

Both for the patient and for the physician, however, organization has its dangers as well as its advantages. The right personal relationship between physician and patient may form quite as essential a therapeutic agent as an X-ray machine. The technical need for organization and the human need for individualization must be balanced against each other.

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### Social Insurance in Russia

THE social insurance laws in force in Russia, according to a recent official publication,<sup>1</sup> cover the wage earners employed by the Soviet State or private concerns, with the following exceptions: Agricultural workers on peasant farms; workers employed in the peasant "Kustar" (cottage) industries, if not more than two workers are employed; artisans in the rural districts; and apprentices in towns, if their wages are paid in kind.

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<sup>1</sup> Soviet Union. Central Social Insurance Administration. Social Insurance in the Soviet Union. Moscow, 1928.



## Benefits under the System

THE FOLLOWING BENEFITS and assistance are provided: (1) Temporary disability, funeral, unemployment, and dependents' benefits; (2) maternity benefits; (3) invalidity and widows' and orphans' pensions; (4) compensation for industrial accidents and occupational diseases; and (5) medical treatment.

*Sick and funeral benefits.*—Temporary disability (sickness) and funeral benefits are paid in cases where disability or death occurred during the period of employment. Benefits are paid from the beginning of sickness up to recovery or the beginning of permanent disability. Seasonal workers, however, are entitled to sick benefits not longer than the termination of the season of work during which the sickness occurs; thereafter they receive unemployment benefits. The casual workers receive sick benefits only for the term of the employment.

The sick benefit is equal to the full wage of the sick worker. In the case of the funeral benefits the country is divided into six zones, and the amount of benefit varies from zone to zone. In the first zone the amount is 45 chervonetz rubles<sup>2</sup> and in the sixth (the lowest) it is 21 rubles.

*Maternity benefit.*—The maternity benefit in the amount of full wage is paid during pregnancy and following confinement—in the case of manual workers, for 8 weeks, and in the case of nonmanual workers, 6 weeks, before and after confinement.

The childbirth benefit is paid for purchasing swaddling clothes, the amount varying, according to the zones—from 30 rubles in the first zone to 16 rubles in the sixth zone.

*Permanent disability benefits* (and pensions for dependents in case of death of the breadwinner), are paid when a worker is disabled by accident or disease during his employment or during the year following the termination of his employment. Duration of employment is not considered, except in cases over 50 years of age, when the worker is granted a pension if he has been in employment at least 8 years prior to his disability.

The disabled workers are classified, according to the extent of their disability, into six classes, and the size of benefit payment for each class is as follows:

	Size of benefit
Class I, total disability, needing attendance.....	Full earnings.
Class II, loss of earning ability to the extent of from 65 to 100 per cent, needing no attendance.....	Three-fourths of earnings.
Class III, loss of earning ability of from 45 to 65 per cent.....	One-half of earnings.
Class IV, loss of earning ability of from 30 to 45 per cent.....	One-third of earnings.
Class V, loss of earning ability from 15 to 30 per cent.....	One-sixth of earnings.
Class VI, loss of earning ability of not more than 15 per cent.....	One-tenth of earnings.

Workers permanently disabled by general disease are paid pensions in the following amounts in the first three classes: I, Two-thirds of their earnings; II, four-ninths of their earnings; III, one-third of their earnings.

<sup>2</sup> One chervonetz ruble (100 kopecs) at par = 51.5 cents.



Dependents of workers whose death resulted from accident or occupational disease are entitled to three-fourths of the worker's earnings for three or more dependents, one-half of the earnings for two, and one-third of the earnings for one dependent.

*Old-age pensions.*—There is no general old-age insurance in the Soviet Union, although such an insurance is in contemplation. As a first step toward it, old-age pensions were introduced on December 1, 1927, for workers in the textile industry. For men at 60 and women at 55 years of age, if they had been in employment at least 25 years, of which the last 5 years must have been in the textile industry, the amount of old-age pension is equal to the rate of pension paid for Class II workers disabled by general disease, i. e., four-ninths of wages.

*Unemployment benefits* are paid to those workers who have previously been in employment and have registered for work either at the employment service or at the trade-union local within three months following the day of leaving employment. The reason of leaving employment is not considered.

In regard to the size of benefit receivable, the unemployed workers are divided into three classes according to their skill and occupation, the correlation of these three classes being: 1;  $\frac{3}{4}$ ;  $\frac{2}{3}$ . In addition, the basic benefit rates vary, according to the zones, from 26 rubles monthly paid to an unemployed person of the first class in the first zone to 11 rubles to one in the first class in the sixth zone.

Family allowances are paid to the following dependents of the unemployed: (a) Children under 16 years, and (b) parents—mother over 50 and father over 55 years. The rate of family allowance depends upon the number of dependents—15 per cent of the basic benefit for a single dependent, 25 per cent for two and 35 per cent for three or more dependents.

#### Source of Funds

THE SOCIAL INSURANCE system in operation in the Soviet Union is a pension rather than insurance system, for the insured workers do not contribute to the insurance fund. The employers—the Soviet State, and cooperative, public and private concerns and individuals—are the sole contributors to the insurance fund. The contributions are calculated on the basis of a certain percentage of wages actually paid to workers.

The contributions are of two classes: "regular" and "reduced." The employers making regular contributions are classified into four groups according to the degree of danger to life and health existing in their establishments:

## SIZE AND DISTRIBUTION OF CONTRIBUTION TO SOCIAL INSURANCE FUND

*Regular contributions*

Class of employer	Total contribution (in per cent of wages)	Allocation of contribution		
		Benefit fund and cost of administration	Medical treatment fund	Workers' housing fund
		<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
Class I establishments.....	16	11.3	4.2	0.5
Class II establishments.....	18	12.8	4.7	.5
Class III establishments.....	20	13.8	5.7	.5
Class IV establishments.....	22	15.3	6.2	.5

*Reduced contributions*

Undertakings of the Soviet Union, also mining, metal, and electrical industries.....	10	6.3	3.2	0.5
Transportation.....	12	7.3	4.2	.5
Undertakings of local public bodies.....	10	.3	2.2	.5
Lumber industry (for export).....	14	9.8	3.7	.5
"Kustari" (engaged in peasant cottage industries) and rural artisans <sup>1</sup> .....	5	3.5	1.5	.....
"Kustari" and artisans <sup>2</sup> .....	5	.....	.....	.....

<sup>1</sup> Payment made in respect of apprentices, "former deserted children."<sup>2</sup> Payments made in respect of apprentices.

## LABOR LAWS AND COURT DECISIONS

### No Recovery for Death of Seamen on Ship Lost at Sea

AMERICAN seamen are not covered by a workmen's compensation act. They must institute legal proceedings for damages based upon the theory that the ship was unseaworthy or that the master or members of the crew were negligent. Where the ship disappears and all on board are lost it is difficult, if not impossible, to prove either unseaworthiness or negligence. The decision of the United States District Court for the Southern District of New York, involving claims for damages arising out of the death of certain seamen on board the steamship *Suduffco* which was lost at sea during 1926, illustrates the difficulty the dependents of seamen have in recovering damages when a ship is lost at sea and no survivors live to tell the facts.

The steamship *Suduffco* sailed from Port Newark, N. J., on the evening of March 13, 1926, with a crew of 29 men, carrying cargo on a voyage via the Panama Canal to Pacific coast ports. At noon on March 14th she reported her position as 132 miles south of Scotland Lightship. No further word of her or the members of her crew was ever received, nor was any trace of her wreck ever found. The ship disappeared completely and all men on board lost their lives.

Claims for damages were presented on behalf of the dependents of several members of the lost crew, based upon the broad ground that the vessel was unseaworthy. The Transmarine Corporation, as charterer, in possession, and the Submarine Boat Corporation, as owner, of the steamship *Suduffco*, filed a petition in admiralty for limitation and exoneration of liability under Revised Statutes, sections 4282 to 4289.

The United States District Court for the Southern District of New York ordered the entry of a decree in the usual form for limitation and exoneration of liability. The court said that upon the proofs presented at the trial the charterer and owner clearly showed seaworthiness at the commencement of the voyage and, accordingly, that they were prima facie entitled to limit their liability to the value of the vessel and her pending freights. The claimants' witnesses who testified in court impressed the court as unreliable, and upon the whole case the court said that it had no hesitation in finding that the vessel was in fact seaworthy. It was pointed out that "the causal connection between wrong and damage upon which it is necessary to predicate liability might perhaps be shown by proof that defects in hull, machinery, or equipment were so serious as to fairly support the inference that they were the cause of her loss. But there is nothing of that kind even in the testimony of the claimants' witnesses. No defect has been shown which in the absence of proof as to how the



ship was lost may be presumed to have been the cause of the disaster." The burden of proof was upon the claimants to establish liability, and upon the charterer and owner to show that they were without privity or knowledge of the facts upon which liability is predicated. "The claimants' proofs fail to disclose how the loss occurred. It is quite impossible, therefore, to find that the vessel sank because of any defect in hull or equipment; from which it follows that petitioners' right to limit is established, and claimants have failed to prove any facts upon which even limited liability may be predicated."

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### Enactment of Old-age Pension Law in California

ON MAY 28, 1929, Governor Young of California signed an old-age pension act (acts of 1929, ch. 530) creating a system under which persons over 70 years of age, citizens of the United States and residents of the State of California for a period of 15 years, may obtain a pension up to a maximum of \$1 a day. The act provides a system of administration under which county or city and county boards of supervisors act upon applications for pensions; and a division of State aid to the aged has been created in the California Department of Social Welfare to supervise and pass upon the measures taken by the supervisors. The pension is payable by the county or city and county, but one-half of the pension is later refunded to the county by the State. This brings the total number of States having old-age pension systems to 10, not including Alaska (California, Colorado, Kentucky, Maryland, Minnesota, Montana, Nevada, Utah, Wisconsin, and Wyoming). A general summary of the act, as well as the text of the law, are given in the article on page 21.

# HOUSING

## Plan for Abolishing Slums in England

**T**HE urgent need immediately after the war for housing of every kind tended to diminish public interest in the attack on the slum, but as arrears of house building are being gradually made up, renewed attention is being given to the older problem. One well-known student of housing problems, E. D. Simon, ex-lord mayor of Manchester and former chairman of the corporation's housing committee, has recently published a book<sup>1</sup> on the subject, *How to Abolish the Slums*, in which he proposes a novel method for use toward that end. The slum exists, he holds, because large numbers of people can not pay the economic rent for a decent dwelling. The only remedy is to make it possible for them to have a decent, sanitary house at a rent they can pay, and to make up the difference by some form of public aid. The form he advises is a rent allowance based on the tenant's earnings and the number of his children; in other words, a kind of child allowance, directed solely toward the provision of healthful housing.

Mr. Simon's argument is that the slums can not be abolished until alternative housing is provided, since people can not be turned out unless there is some place for them to go. For the same reason, the authorities can not insist on having the slum houses repaired or improved to any effective extent, since the needed repairs would involve displacing the tenant temporarily, and because of this the condition of the slum houses is growing steadily worse. But the alternative housing must be within the tenant's means, or else it is useless for the solution of this particular problem. By the use of the closest economy and with the aid of the present Government subsidy, a standard minimum house with three bedrooms, living room, scullery, and bathroom can be built to let for from 10s. (\$2.43) a week upward, but this meets only part of the need. Investigation of family earnings and family budgets shows that "at least one-half of the households in the country are paying less than 10s. and are unlikely to pay more."

To sum up, we have to-day in the slums about half a million families with three or more children, and a further 350,000 families with one or two children, who can not possibly afford the rent of a standard minimum house. As these figures are very approximate, it would be safer to say that roughly there are a million families in the urban districts of England and Wales who can not provide their children with the barest physical necessities, and in addition pay the rent of a standard minimum house.

Given such a situation, Mr. Simon contends that England should meet it as she does the need for education, and for public health work, and similar necessities. The slum is a menace to the community as a whole, and especially to the children growing up in its environment, public aid in removing children to more healthful surroundings is in line with numerous other forms of social work, and the only arguable question is how such aid can be given most effectively.

<sup>1</sup> Simon, E. D.: *How to Abolish the Slums*. London, Longmans, Green & Co., 1929.

The greatest care must be taken that "subsidies are in such a form that they will impose the minimum burden on the public purse which is consistent with achieving their object." A general increase in the housing subsidy is not recommended; there is still a large demand for houses which can be let at from 10s. to 12s. (\$2.43 to \$2.92) a week, and as long as this is the case, it would be foolish and unnecessary to give any aid beyond the present subsidy for producing such houses. But there is also a large group of the population which ought to be housed in exactly the same type of dwelling, but which can not afford a rent of even 10s. a week.

If that is the case it at once becomes clear that the additional subsidy must be based, not on the type of house, but on the needs of the family.

This is quite a new principle in housing subsidies; on the other hand, it is exactly the principle which is applied as regards education. It seems to be quite clear that if the slums are really to be abolished, and if it is to be done at the lowest possible cost to the exchequer, it must be done by means of a subsidy based on family needs.

Once this is admitted, the general form which such a subsidy must take is fairly clear. The needs of the family depend on two things: First of all the income, and secondly the number of children. A suitable subsidy for our purpose would necessarily be limited to families who, on the one hand, have less than a certain income, and on the other hand, have more than a certain number of children. As a concrete proposal, let us suggest that the subsidy might go to those who have—

- (1) An income of 60s. [\$14.60] a week or less.
- (2) Three or more children.

A children's rent allowance of 1s. [24.3 cents] a week for each of these children would give the 3-child family a standard minimum house for 7s. [\$1.70], a rent which is about the same as they are paying in the slum to-day. What would this cost? We have shown \* \* \* that about 2,000,000 children would be involved. The cost would, therefore, be 2,000,000 shillings a week, or about £5,000,000 [\$24,332,500] a year.

Given such a plan as this, Mr. Simon points out, sweeping slum clearances might not be necessary. Instead, it would be possible to proceed against the slum by securing closing orders against landlords whose houses were unfit for occupancy, thus throwing on the individual landlord the responsibility for dealing with his own property. Meanwhile, a vigorous house-building campaign would have to be carried on, families being moved out from the unfit houses as suitable ones became ready for them. Some changes in rating methods are also recommended in order to keep rents down to the economic minimum.

According to reports in several English papers and journals, the plan has been accorded serious consideration and discussion, in spite of its novelty. At a meeting of representatives of local authorities in Lancashire and Cheshire, held in Manchester April 17, to confer upon housing problems, the housing committee presented a resolution embodying this plan, which was adopted. Mr. Simon had presented the resolution to the committee, and gave the general meeting a brief summary of its reception.

At the beginning, two-thirds of the 29 members of the committee were opposed to the principle of the scheme, but after a very thorough discussion the principle was unanimously approved. Something of the kind had been done already at Banbury and in Scotland. It would provide a chance to get the 2,000,000 children out of the slums. As an example, the committee had suggested a case where the full weekly income was less than 45s. a week, and where the number of dependent children entitled the family to a maximum allowance of 5s. a week. Such a family would get an 11s. a week house for 6s. a week.



Housing in Spain<sup>1</sup>

**A** PAMPHLET describing the housing situation in Spain has recently been issued by the Ministry of Labor, Commerce, and Industry of that country.

The writer describes the overcrowded conditions in the large cities due both to the natural increase in population and to the migration of country people attracted to the cities, which results in a scarcity of dwellings both for the middle class and the workingmen. The latter are compelled to live either in a few rooms in tenements in the old districts of the towns, where lack of air, sunlight, and sanitation produce a high mortality rate, or in poorly constructed shacks rented or built by themselves on the outskirts of the towns, which are not far superior to the tenements.

Since 1911 the Government has encouraged the building of inexpensive houses to remedy conditions, by tax exemption, building subsidies, State loans, and payment of part of the interest on loans and debentures. Special advantages are granted to cooperative societies building houses to be sold to their members.

On June 1, 1928, the Government had spent 176,647,208 pesetas<sup>2</sup> in aiding the housing situation.

In the Province of Vizcaya workmen's cooperative societies have built 2,332 cottages while in Málaga a garden suburb with 1,049 dwellings is under construction. Two housing schemes are being launched in Sevilla with 390 and 1,500 houses, and in Madrid another with 1,611 flats in several-storied tenements is under way.

<sup>1</sup>Spain. Ministerio del Trabajo, Comercio y Industria. *Las Casas Baratas en España*, by Federico López Valencia. Madrid, 1928. (In French, English, and Spanish.)

<sup>2</sup> Peseta in 1927=17.1 cents.

## COOPERATION

### Progress of Cooperative Wholesale Societies in 1928<sup>1</sup>

**C**ONTINUED progress is shown by the reports of the two leading cooperative wholesale societies for 1928.

The Farmers' Union State Exchange, at Omaha, Nebr., reports sales amounting to \$1,775,849, on which a net profit of \$37,930 was made. (The sales for 1927 were \$1,618,288 and the profit \$49,096.) By paying cash for all its goods the exchange earned \$23,010 in discounts. The exchange, in addition to its wholesale business, operates 10 retail branches whose equipment is valued at \$155,823. The assets of the association are \$529,537, the paid-in share capital is \$325,637, the surplus amounts to \$37,070, and the reserves to \$42,973.

The manager of the wholesale, in his report, pointed out: "This is a very different story from seven years ago, when we were over \$100,000 in the red for the previous year, with no surplus, no reserves, and not enough credit to buy 50 bags of sugar. This improvement is not due to management alone, but to teamwork in the Farmers' Union."

At present less than 20 per cent of the business of the wholesale is done with the shareholders. In the attempt to weed out the inactive members the annual meeting authorized the directors to credit the patronage rebates of nonshareholder customers to the purchase of shares in the organization and to buy back the shares held by nontrading members as rapidly as conditions will permit.

The Cooperative Central Exchange, at Superior, Wis., had sales in 1928 amounting to \$1,517,813 as compared with \$1,255,676 the year before. Its net profit for 1928 was \$23,894, of which \$17,455 was returned to member societies in patronage rebates, \$3,681 was paid in interest on capital stock, and \$2,758 was added to the reserve fund. The reserves now amount to \$12,565 and the share capital to \$65,733.

The number of affiliated societies has increased from 76 to 84, and the number of customer societies from 105 to 114.

The net worth of the organization is \$102,193.

The cost of operation of the exchange has shown a steady reduction during the past three years. In 1926 operating expenses amounted to 10.6 per cent of sales, in 1927 to 9.9, and in 1928 to 9.6 per cent. The report of the organization points out that although the sales have increased, the accounts receivable have not increased in proportion, due largely to the fact that the majority of the affiliated societies have put their stores upon a strictly cash basis and are more and more becoming able to discount their own purchases from the exchange.

The aim of the exchange is to market all possible goods under its own label. In this way the exchange can set its own standard of

<sup>1</sup> Data are from Nebraska Union Farmer (Omaha), Jan. 23, 1929; Cooperation (New York), April, 1929; and Cooperative Pyramid Builder (Superior, Wis.), April, 1929.

quality and weight and guarantee goods so marketed. Aside from the consideration of quality, the exchange has found that there is a decided advantage in price, due probably to the saving in advertising cost. The exchange now sells under its own label wheat and potato flour, coffee, matches, dried fruit, canned soups, salmon, pumpkin, wax and string beans, tapioca, wheat cereal, gloss and corn starch, olives, olive oil, toothpicks, canvas gloves, roofing and building paper, nails, fencing, cookies, paints, macaroni, oil, grease, condiments, and sirups. The list of label commodities is enlarged every year. The exchange also operates a bakery.

Much educational work is done by the organization, and it and its affiliated stores form perhaps the most energetic and enthusiastic cooperative group in the United States.

### A Cooperative Temperance Café

**C**OOPERATIVE eating places are a rare form of cooperative organization in the United States. One of the best known of these societies is the Consumers' Cooperative Services of New York City, which operates a number of cafeterias. There are quite a few cooperative boarding and rooming houses run by Finnish groups, and a very few cooperative restaurants. Perhaps the most unusual of the last-named group is the Cooperative Temperance Café "Idrott" in Chicago, which is described in the April, 1929, issue of *Cooperation* (New York).

The café was organized in the autumn of 1913 by a number of young Swedish men in Chicago who were interested in temperance work and in athletics<sup>1</sup> and needed some gathering place.

The organization has no capital stock. Each member pays an entrance fee of \$5. No member can contribute more than this. Only 10 new members can be admitted each year and these must be of Swedish nationality or descent. No rebates are paid on patronage; the surplus earned by the business is used to expand the business and for educational purposes. The educational activities of the society include the maintenance of a library and reading rooms, entertainments, lectures, etc.

The organization operates a restaurant, library and reading rooms, bakery, and bakery store in its main building, and a branch restaurant. All business is done on a strictly cash basis. The business has increased from year to year, as follows:

1923	\$67, 596
1924	160, 169
1925	186, 563
1926	270, 906
1928	292, 160

The society has a membership of 201.

The real estate and buildings owned by it are valued at \$115,611. Its surplus, built up from earnings, is \$72,039, and the membership fees amount to \$1,005. The net gain on the year's business in 1928 was \$12,859.

<sup>1</sup> "Idrott" means "sports, athletics."



## Cooperative Purchasing by Farmers in the United States <sup>1</sup>

**A** SURVEY made by the United States Department of Agriculture in 1925 revealed that of 10,803 farmers' organizations, nearly half were doing cooperative buying for their members—mainly of fuel, containers, seeds, fertilizers, building materials, implements, and hardware. Of recent years gasoline and motor oils have been added to this list. In 1927 the goods so bought were valued at more than \$300,000,000. Two farmers' business organizations in that year handled more than \$10,000,000 worth of such business and another approximately \$7,800,000 worth. Half a dozen associations had an annual cooperative purchasing business of more than a million dollars each.

Efficient cooperative buying makes possible a material saving in the cost of farm operations and gives better control of quality in the supplies purchased. Savings are effected through centralized buying, reduced credit losses, and large-scale operations. Organized buying power powerfully supplements organized selling power in the farmer's campaign to eliminate unnecessary or excessive distribution costs. But the benefit thus obtained, though substantial, does not rank first in the advantages of cooperative purchasing. That place is held by the voice given the farmer in determining the quality and character of what he purchases. In buying production goods such as feed and fertilizer, the farmer is interested in prices certainly; but he is primarily interested in getting the kind of goods that he ought to have. Cooperative purchasing protects farmers against having to take articles of the wrong quality or the wrong kind.

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## Cooperation Among Fishermen in Canada

**A** RECENT report of a Canadian commission appointed to study the condition of the fishing industry in that country is reviewed in Cooperative Information No. 3, 1929, issued by the International Labor Office.

The commission found that fishermen in the Maritime Provinces of Canada had not shared in the recent prosperity of the country. Although the prices of their implements of production have increased their remuneration has not. "The shore fisherman receives a smaller percentage of the dollar paid by consumers of fresh fish in large cities than is received by producers of other food commodities." The commission's investigations led it to the conclusion that "if the shore fishing industry is to succeed, cooperation among fishermen is absolutely and immediately essential."

Stating that "cooperation is no longer an experiment," the report cites two lobster fishermen's cooperative associations in Prince Edward Island, one of which secured for its members last year 2 cents a pound more than the average received by other lobster fishermen.

Such organizations are very few, however, and the commission therefore recommends that the Federal Government assist the fishermen in establishing cooperative organizations, after a preliminary survey to determine the localities where such organizations are possible or feasible.

We suggest that after careful study the Maritime Provinces be divided into zones or districts, the limits of which shall be determined by the number of

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<sup>1</sup> Press release of the U. S. Department of Agriculture, dated Mar. 16, 1929.

fishermen and the quantity of production; that each of these zones be organized into a fishermen's cooperative association; and that the zones so organized be again included in a provincial body, and perhaps into one association of the entire Maritime Provinces. In certain places in each of the zones or districts so formed, small brine-freezing or rapid freezing plants, with a small auxiliary cold-storage building, with salt and ice equipment, should be established; and at a central point, within a day's transit of these small local plants, a large cold-storage building, and possibly a fish-waste plant where warranted by quantity of waste, should be provided, all with initial subsidy assistance from the Federal Government. The large, central cold-storage building would take care of surplus frozen fish direct from the freezers, or would take the surplus product from the smaller local storage buildings. From such an organization a marketing sales board to control the output of the product from the various centers to the various markets, and selling agents to control the distribution in the larger places of demand, would dominate the market, keep it on a stable basis, and, with the organized power of bargaining, could dictate reasonable prices alike for producer and consumer, and gain a reasonable profit. Such a plan would insure a more direct contact between producer and consumer, and would eliminate some of the costs for services which now intervene.

Under such a plan loans for the purchase of boats or equipment, and also insurance on fishing property and equipment might be arranged for fishermen through their associations. Group life insurance might also be possible. We believe that such organizations would solve many of the fisherman's problems and would establish his industry as a profitable and lucrative pursuit, giving to those engaged in its primary operations the independence and adequate reward which have hitherto been lacking.

#### Fishermen's Cooperation in Newfoundland

IN THIS connection an article in the April, 1929, issue of the Canadian Cooperator (Brantford, Ontario) is of interest, giving an account of the progress of cooperation in Newfoundland. Thus far, the article states, cooperation has had only moderate success there and only two forms of cooperative activity are found—cooperative stores and the cooperative marketing of fish.

At various times cooperative stores have been started, but most of these have had little success and several have failed for large amounts. The Grenfell Association in connection with its religious and medical work had at one time several cooperative stores in operation but only one is running to-day. Another, and reputedly successful, store is mentioned and it is stated that another store is planned—both in industrial centers. These appear to be the extent of consumers' cooperation in Newfoundland at present.

The reasons for the small success of cooperative stores are said to be that in the few industrial towns of the island "the big companies have their own stores where workingmen are practically bound to trade." In the fishing centers the fishermen are so much in debt to the merchants for their winter purchases "that almost all their summer catch is turned over to these dealers in payment for provisions, clothing, and fuel. They live, so to speak, from hand to mouth; and besides are not sufficiently self-reliant to engage in cooperative ventures, even when they can free themselves from the yoke they are bearing."

The only attempt of the fishermen to organize for their own interests is through the Newfoundland Fishermen's Protective Union. Organized in 1908, it had a rapid growth and by 1919 had a membership of some 20,000. By 1923 it had become one of the political parties of the colony.



The cooperative catching and marketing of fish has been the main function of the union. Starting business in 1911 with a capital of \$8,000, eight years later it had a paid-in share capital of \$225,000 and a reserve fund of \$250,000.

The union owns a fleet of schooners and a steamer used in the spring for seal fishing. Some 28 fish stores are operated. Large stores are located at Port Union, a town practically built by the association, which has all the modern conveniences and the largest fish pier in the island. For the past 10 years the union's exports of cod have averaged 8,000,000 pounds annually.

Though the main business of the organization is the fish industry, there are also other businesses carried on by the union: The Union Light & Power Co. with capital of \$50,000; the Union Shipbuilding Co. with capital of \$25,000; and a large sash and door factory.

As the years have gone by, the union enterprises have lost to a great extent their cooperative character. Payment of rebates on purchases at the stores has been discontinued. The union was organized with the understanding that all the members would be shareholders in the enterprises; as a matter of fact only some 6,000 of 22,000 members hold shares, and instead of the one-man one-vote principle each shareholder votes in proportion to his holdings. The claim is made, however, that the nonshareholder members benefit "as union men" through the organization activities.

### Consumers' Cooperative Movement in Finland

**A** BOOK recently issued<sup>1</sup> deals with the growth and economic importance of the cooperative movement in Finland, from which the following data are taken:

Finland is mainly an agricultural country and the majority (some 65 per cent) of its inhabitants are therefore employed in agriculture, and nearly 90 per cent of the cooperative societies are rural.

The author states that cooperation in Finland presents a variety of forms not found to the same degree in any other country. At the end of 1924 there were 4,266 registered societies, in addition to which there were many not so enrolled. The membership exceeded 600,000, or approximately one cooperator for every six inhabitants. "In more than one-half of the Finnish communes one family of every two, and in 10 per cent of the same communes all the families, belonged to a cooperative."

The three largest groups of societies are the consumers' organizations, the dairies, and the agricultural credit societies. Other types of societies include corn mills, sawmills, electric power societies, peat societies, fishing societies, livestock associations, bakeries, construction societies, farm supply associations, telephone companies, etc. Characteristic of Finnish cooperation, also, are the cooperative cafés and restaurants, which have attained a degree of success not found in other countries. Although the cooperative credit societies are the most numerous, the consumers' organizations are the most important

<sup>1</sup> Molin, P.: *Le mouvement coopératif en Finlande—Son rôle économique et social*. Paris, Librairie Générale de Droit et Jurisprudence, 1928.



and most powerful group, having five times as many members and representing at least a million and a half cooperators; "thus one-half of the Finnish people have been won over to the cause of cooperation."

The author divides the history of the movement into three periods: 1900-1908, 1909-1914, and 1914 to the present. The first period was one of unceasing growth, the second one of more or less stagnation, while the third has witnessed a divisive tendency between the two dominant classes of cooperators, the farmers and industrial workers. The primary cause of friction was over the attitude to be taken toward political matters, but the feeling became acute on the question of the method of voting at conventions, the agricultural societies favoring the policy of one vote for each society, regardless of size, while the workers' societies favored representation in proportion to membership. In 1916 the workers' group withdrew and formed another central union and a year later their own wholesale society. This group stands for active participation in politics and all working-class movements, while the original group adheres to the policy of neutrality in such matters.

The author is of the opinion that this scission has not involved any great damage to the movement, but that on the contrary it has proved rather to be a stimulus. "It is even preferable that the farmers have their particular organization, for their interests are often in opposition to those of the urban consumers." The only ones which have suffered from the split have been the productive enterprises, as neither of the two factions has had sufficient funds to carry on its own productive enterprises satisfactorily.

From 1918 to 1924 the number of societies affiliated with the old union fell from 494 to 461, the members increased from 170,400 to 179,775, and the sales from 349,000,000 Finnish marks to 1,210,000,000 marks. In the same period the societies affiliated with the new group rose from 87 to 110, the members from 95,216 to 185,338, and the sales from 147,000,000 marks to 967,000,000 marks.

The most important consumers' society is the "Elanto" in Helsingfors, started in 1906, which has nearly 30,000 members out of a population of some 200,000 persons. Its development the author characterizes as "marvelous."

As to the make-up of the cooperative membership of the old and new groups, the author gives the following data:

	Neutral group (per cent)	Progressive group (per cent)
Landed proprietors.....	44.1	10.6
Farmers.....	12.7	8.4
Agricultural laborers.....	10.1	10.6
Officials.....	6.7	3.1
Small merchants.....	5.7	7.7
Industrial workers.....	6.7	44.8
Other workers.....	7.7	9.2
Liberal professions.....	2.5	1.8
"Collective adherents" (i. e., member organiza- tions).....	3.4	2.8
Miscellaneous.....	.4	1.0
Total.....	100.0	100.0

### Consumers' Cooperative Movement in Poland

THE January-March, 1929, issue of *Revue des Études Coopératives* contains an article on the development and present status of the cooperative movement in Poland.<sup>1</sup>

According to this article, consumers' cooperation in Poland dates from 1869 when two economists of Warsaw became interested in the movement. The idea spread only slowly, however. Up to 1906 only about 50 societies had been formed. But the revolution of 1905 had won for the people comparative freedom of association and this resulted in a rapid expansion of the cooperative movement. By 1908 there were 670 consumers' societies. In that year a convention of societies was held at which it was decided to form a cooperative wholesale society. Its actual formation, however, was delayed until 1911.

Just before the World War the union (located at Warsaw) had in affiliation 297 member societies with 39,000 members. In addition, and without connection with the union, there was a group of Catholic societies with their own central organization; a number of independent societies; and in Austrian and German Poland (Galicia, Silesia, and Upper Silesia) some societies either independent or having their own unions. Altogether before the war there were on Polish territory about 1,300 consumers' cooperative societies with 122,000 members and annual sales of 20,000,000 roubles (\$10,292,000).

The war brought about certain changes. The impossibility of maintaining continuous contact between the wholesale and its affiliated societies resulted in the formation of nine regional wholesales which in practice enjoyed complete autonomy. The advantages offered by the cooperative movement as a medium of provisioning the people resulted in considerable expansion of the movement and the Warsaw Union emerged from the war period with 327 member societies, with 57,000 members, which did a business of some 37,000,000 marks per year; the wholesale's yearly business with these societies amounted to some 6,000,000 marks. The union was operated on strictly Rochdale principles and observed political neutrality. A socialist movement had, however, grown up, having its own central body, called the "Workers' Union of Cooperative Societies"; the Catholic "Central Society of Christian Cooperatives" resumed its activities; and there was also a powerful group of societies of State employees, as well as one of soldiers' or military cooperative societies. Altogether there were some 2,200 societies with 200,000 members and an annual business of some 100,000,000 marks.

The movement grew rapidly, but to a large extent upon a political or professional basis. Much of this growth disappeared when the period of deflation of currency set in, and only the stronger and more stable enterprises were able to survive. One after the other the group of State employees' organizations, the Socialist societies, and the Catholic societies were forced to join with the original Warsaw Union, now known as the Union of Consumers' Cooperatives of the Polish Republic. In 1926 the union had 870 member societies, including 203 societies of the "military" group which, while main-

<sup>1</sup> *Revue des Études Coopératives* (Paris), January-March, 1929, pp. 188-212: Le mouvement coopératif en Pologne, par G. Kurnatowski.

taining relations with the union and patronizing its wholesale, nevertheless have their own auditing and educational organization.

There are at present outside the union three other groups of consumers' cooperative organizations: (1) A certain number of consumers' societies which are affiliated with the Federation of Cooperative Unions in Poland, a body whose membership includes all types of cooperative organizations. Some 173 consumers' societies belong to this federation. (2) A group of Ukrainian societies which includes in its number all types of organizations, of which 21 are consumers' societies (of a total of 1,110 societies). (3) Societies which are unaffiliated with any central organizations. There are about 800 of these.



# LABOR ORGANIZATIONS

## Membership of Workers' Organizations in 62 Countries, 1928

THE accompanying table shows the number of organized workers in various countries of the world on January 1, 1925, and on January 1, 1928. The figures are taken from a more detailed table published in the April, 1929, issue of The International Trade Union Movement, the official organ of the International Federation of Trade Unions.

NUMBER OF ORGANIZED WORKERS IN VARIOUS COUNTRIES, JANUARY 1, 1925, AND JANUARY 1, 1928

Country	Total membership		Country	Total membership	
	1925	1928		1925	1928
Argentina.....	120,000	164,874	Italy.....	2,234,520	2,768,730
Australia.....	729,155	911,652	Japan.....	230,000	316,906
Austria.....	1,044,068	963,550	Latvia.....	38,867	34,032
Belgium.....	726,126	762,886	Lithuania.....	28,250	18,486
Bolivia.....		5,000	Luxemburg.....	14,087	15,479
Brazil.....	104,000	22,562	Memel Territory.....	3,894	1,024
British Guiana.....		1,073	Mexico.....	838,000	2,119,347
Bulgaria.....	49,803	2,485	Mongolia.....		5,000
Canada.....	201,981	209,282	New Zealand.....	96,821	80,000
Ceylon.....		40,000	Nicaragua.....		6,000
Chile.....	162,000	204,000	Norway.....	94,567	104,152
China.....	300,000	2,800,000	Palestine.....	14,835	21,873
Colombia.....		11,400	Panama.....		3,000
Corea.....		123,000	Paraguay.....		8,000
Cuba.....	100,000	250,000	Peru.....	25,000	25,000
Czechoslovakia.....	1,669,456	1,696,897	Philippines.....		67,000
Denmark.....	306,158	309,885	Poland.....	539,089	577,581
Dutch East Indies.....	60,000	24,021	Porto Rico.....		18,000
Egypt.....	12,000	60,000	Portugal.....	36,000	40,000
Estonia.....	30,000	14,331	Rumania.....	46,863	46,631
Finland.....	47,312	75,846	Russia.....	6,604,684	10,248,000
France.....	1,068,046	1,218,250	Salvador.....		10,000
Germany.....	6,900,000	8,217,923	South Africa.....	27,670	82,660
Great Britain.....	5,531,000	4,908,000	South West Africa.....		600
Greece.....	56,680	98,470	Spain.....	453,578	262,000
Guatemala.....		3,000	Sweden.....	451,650	529,974
Holland.....	517,914	407,665	Switzerland.....	261,713	254,992
Honduras.....		6,000	Uruguay.....		28,484
Hungary.....	267,885	185,337	United States.....	3,606,738	4,241,542
Iceland.....	4,000	4,540	Yugoslavia.....	64,000	57,717
India.....	195,800	300,000			
Ireland.....	148,501	111,921	Total.....	36,062,711	46,187,060

<sup>1</sup> As given in report; items add to 46,106,060.

### Membership of International Federation of Trade Unions

THE following statistics on membership in the International Federation of Trade Unions on January 1, 1928, are taken from the April, 1929, issue of the official organ of that body, the International Trade Union Movement:

TABLE 1.—MEMBERSHIP OF CONSTITUENT NATIONAL CENTERS OF THE INTERNATIONAL FEDERATION OF TRADE UNIONS, JANUARY 1, 1928

National centers	Men	Women	Total	Number of affiliated unions	Increase or decrease in membership during year
					<i>Per cent</i>
Argentina.....	81,939	635	<sup>1</sup> 82,574	14	
Austria.....	597,771	174,991	772,762	51	+2.2
Belgium.....	368,933	55,120	<sup>2</sup> 530,575	26	-3.9
Bulgaria.....	2,314	171	2,485	34	-0.6
Canada.....			<sup>3</sup> 140,195	145	+11.0
Czechoslovakia.....	427,899	113,738	541,637	71	-1.2
Denmark.....	116,472	39,953	156,425	52	+0.1
Estonia.....			<sup>4</sup> 5,071	26	
France.....			<sup>5</sup> 605,250	37	
Germany, A. D. G. B.....	3,582,944	680,508	<sup>6</sup> 4,415,689	38	+12.2
Germany, A. F. A.....	311,749	83,052	394,801	14	+1.7
Great Britain.....	3,471,558	403,284	3,874,842	196	-6.9
Holland.....	190,516	12,180	202,696	29	+3.3
Hungary.....	108,670	18,752	127,422	39	+0.9
Latvia.....	14,401	4,331	18,732	20	+18.4
Lithuania.....			<sup>1</sup> 18,486	9	
Luxemburg.....	14,058	121	<sup>1</sup> 14,179	12	
Memel Territory.....	748	276	1,024	5	-12.0
Palestine.....	15,828	6,045	21,873	35	-2.0
Poland.....	241,991	28,590	271,581	30	+11.1
Rumania.....	23,350	3,433	26,783	11	-12.1
South Africa.....			<sup>2</sup> 60,660	54	
South West Africa.....			<sup>3</sup> 600	6	
Spain.....			<sup>5</sup> 221,009	33	
Sweden.....	397,357	40,617	437,974	36	+5.6
Switzerland.....	147,778	17,914	165,692	17	+7.7
Yugoslavia.....	30,677	2,540	33,217	27	+21.7
Total.....	10,146,953	1,687,251	<sup>6</sup> 13,144,225	1,067	+2.4

<sup>1</sup> Jan. 1, 1927.

<sup>2</sup> Including 106,522 members not classified by sex.

<sup>3</sup> Not classified as to sex.

<sup>4</sup> Including 152,237 young workers not classified by sex.

<sup>5</sup> Jan. 1, 1927; not classified as to sex.

<sup>6</sup> Including 1,310,021 members not classified by sex.

The table below gives the membership of the International Trade Secretariats on January 1, 1928, together with the increase or decrease in such membership as compared with January 1, 1927:

TABLE 2.—MEMBERSHIP OF INTERNATIONAL TRADE SECRETARIATS, JANUARY 1, 1928

Secretariat	Membership	Affiliated—		Increase or decrease in membership during year
		Countries	Unions	
				<i>Per cent</i>
Bookbinders.....	82, 979	15	16	+4. 4
Building workers.....	844, 714	20	25	+10. 9
Clothing workers.....	302, 771	18	28	-1. 3
Diamond workers.....	22, 830	7	9	+0. 6
Employees.....	706, 808	19	47	+2. 2
Factory workers.....	605, 946	14	22	+7. 8
Food and drink trades.....	773, 409	19	31	+3. 8
Glass workers.....	89, 843	11	12	-5. 3
Hairdressers.....	19, 169	9	9	-----
Hatters.....	37, 273	10	11	-23. 3
Hotel employees.....	66, 664	15	17	+6. 4
Land workers.....	371, 631	14	18	+18. 1
Leather workers.....	306, 157	15	26	+8. 0
Lithographers.....	49, 247	20	21	+6. 9
Metal workers.....	1, 835, 541	19	28	+16. 0
Miners.....	1, 652, 748	17	17	-12. 0
Painters.....	237, 104	12	13	+30. 7
Postal employees.....	383, 205	21	30	-19. 4
Pottery workers.....	152, 192	6	6	+27. 4
Public services.....	523, 975	15	17	+5. 1
Stone workers.....	112, 257	12	14	+8. 0
Teachers.....	80, 964	5	7	-----
Textile workers.....	960, 901	11	12	+2. 1
Tobacco workers.....	119, 804	12	13	+12. 6
Transport workers.....	2, 084, 168	33	77	+2. 0
Typographers.....	183, 314	22	22	+1. 5
Wood workers.....	1, 062, 067	25	48	+6. 2
Total.....	13, 657, 681	-----	596	+3. 9

<sup>1</sup>Jan. 1, 1927.

### Merger of English Trade-Unions

THE English labor paper, The Daily Herald, announces in its issue for May 24 that "a decisive majority has been recorded for the amalgamation of the Workers' Union with the Transport and General Workers' Union, and the amalgamation is to take effect as from August 5 next." The vote on the question showed 229,308 for and 30,726 against the merger, giving a majority of not far from 200,000 in favor of the move. The joint membership of the two unions approaches half a million.



## WORKERS' EDUCATION

### Educational Opportunities for Workers in New York State

**I**N EFFORTS to make educational opportunities available to workers New York ranks well with other States, according to a recent report of the National Industrial Conference Board.<sup>1</sup> The general educational standards in New York State, as indicated in compulsory school attendance legislation, in the compulsory setting up of part-time continuation schools, and in the registration of employed children under 16 years of age, compare favorably with such standards in other industrial States. In Ohio, however, a longer period of compulsory school attendance is required and the degree of education demanded of the minor under 16 wishing to leave school for employment is much higher.

Substantially, New York extends to workers the same types of training as are offered by the other industrial States. While the per capita enrollment in the general part-time or continuation school and the all-day and trade school has been greater in New York than in any other State, the report suggests that this higher registration may be the outcome of the New York policy—but recently abandoned—of applying “all the available Federal aid for industrial education to these two types of schools.”

Under the compulsory school attendance system in the United States, almost all of the labor supply for both commerce and industry, with the exception of immigrants of working age, comes from the public schools.

Private schools are an important element in our educational system, but the great mass of the public receives its training, particularly in the earlier years, in the public schools. The labor force in this country is made up largely of persons whose school training has been limited to the elementary and primary grades. In New York State, 96.2 per cent of all persons 12 years old are in school, while only 16 per cent of those 18 years old are in school.

Only about 14 per cent of the high-school pupils in the United States continue to the twelfth grade. Consequently any school's influence, to be exercised on industrial workers must “be exerted in the elementary grades and in the early years of high school, or in the modern specialized schools which have been created to care for pupils in the upper grammar and high-school grades.”

In the adaptation of our policies and methods of education to the requirements of the hundreds of thousands of young people whose school training for one reason or another does not come up to the ideal proposed under the law, New York shows “definite evidences of progress.”

<sup>1</sup> National Industrial Conference Board (Inc.). *Public Schools and the Worker in New York. A survey of public educational opportunities for industrial workers in New York State.* New York, 1928.

The National Industrial Conference Board finds that the State has already made a good beginning toward establishing closer relations between education and the actual conditions and requirements of "our changing economic society." There is, however, much more to be accomplished along these lines.

The following table, reproduced from the above-mentioned report, lists the public opportunities for education offered to young people preparing to enter, or already employed in, trade or industry in New York State:

SUMMARY OF PUBLIC EDUCATIONAL OPPORTUNITIES FOR TRADE OR INDUSTRIAL TRAINING IN NEW YORK STATE

School	Courses offered	Age or other entrance requirements
Elementary schools-----	General elementary education-----	
Junior high schools-----	Vocational guidance, vocational training and general education.	Completion of sixth grade.
Unit technical schools or technical high schools.	Vocational training and general courses in English, history, mathematics, etc.	14 or completion of elementary school course.
High schools (traditional)---	General courses and manual training courses.	Completion of eighth grade.
General industrial schools---	Vocational training-----	14 or completion of elementary school course.
Continuation schools-----	Vocational guidance-----	14 to 17, inclusive.
Evening schools-----	Americanization courses, apprentice courses, industrial and commercial courses.	16 and over.
Normal schools-----	Industrial teacher-training courses---	High-school graduation or one year of high-school work and five years' trade experience.
Engineering schools and colleges.	Advanced technical education-----	High-school graduation.

# INDUSTRIAL DISPUTES

## Strikes and Lockouts in the United States in May, 1929

DATA regarding industrial disputes in the United States for May, 1929, with comparable data for preceding months are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1927, TO MAY, 1929

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost during month
	Beginning in month	In effect at end of month	Beginning in month	In effect at end of month	
1927					
January.....	37	18	5,915	2,287	58,125
February.....	65	45	9,756	5,717	115,229
March.....	74	67	13,142	8,182	214,283
April.....	87	88	202,406	199,701	5,265,420
May.....	107	116	22,245	200,702	5,136,006
June.....	80	88	18,957	196,323	4,863,345
July.....	65	63	33,994	199,287	5,308,123
August.....	57	53	8,150	198,444	4,999,751
September.....	57	58	12,282	196,829	4,945,702
October.....	50	58	13,024	82,095	2,724,117
November.....	27	51	5,282	82,607	2,040,140
December.....	28	54	4,281	81,220	2,129,153
1928					
January.....	48	63	18,850	81,880	2,128,028
February.....	52	58	33,441	103,496	2,145,342
March.....	41	47	7,459	76,069	2,291,337
April.....	71	48	143,700	129,708	4,806,232
May.....	80	56	15,640	133,546	3,455,499
June.....	44	46	31,381	143,137	3,670,878
July.....	54	42	18,012	132,187	3,337,386
August.....	59	42	8,887	105,760	3,553,750
September.....	52	34	8,897	62,862	2,571,982
October.....	61	42	27,866	41,474	1,304,913
November.....	44	38	37,840	38,745	1,300,362
December.....	23	29	5,172	35,842	991,238
1929					
January.....	45	34	14,727	39,484	949,692
February.....	48	34	20,134	40,385	921,583
March.....	77	42	14,052	41,321	1,094,161
April <sup>1</sup> .....	109	59	32,963	55,332	1,458,992
May <sup>1</sup> .....	80	70	20,881	59,216	1,607,132

<sup>1</sup> Preliminary figures subject to revision.

TABLE 1 is a summary table showing for each of the months—January, 1927, to May, 1929, inclusive—the number of disputes which began in those months, the number in effect at the end of each month, and the number of workers involved. It also shows, in the last column, the economic loss (in man-days) involved. The number of workdays lost is computed by multiplying the number of workers



affected in each dispute by the length of the dispute measured in working days as normally worked by the industry or trade in question.

### Occurrence of Industrial Disputes, by Industries

TABLE 2 gives by industry the number of strikes beginning in March, April, and May, 1929, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN MARCH, APRIL, AND MAY, 1929

Industry	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	March	April	May	March	April	May
Auto, carriage, and wagon workers		1			127	
Bakers			1			15
Barbers		1	2		14	641
Brick and tile workers	3			131		
Building trades	10	29	36	1,115	5,332	11,767
Chauffeurs and teamsters	6	3	7	367	401	2,531
Clerks and salesmen		2			1,300	
Clothing workers	23	16	4	3,578	4,549	1,367
Farm labor		1			100	
Furniture workers	3	4	1	62	664	10
Glass workers	1			32		
Hotel and restaurant employees	1	1	1	70	1,500	75
Iron and steel workers		1			150	
Laundry workers			1			200
Light, heat, and power employees			2			51
Longshoremen and freight handlers			1			8
Metal trades	3	6		85	921	
Mining	3	5	5	1,478	5,975	1,310
Motion-picture operators, actors, and theatrical workers	1	1	1	94	24	18
Oil and chemical workers	1			69		
Paper and paper goods workers		2			90	
Printing and publishing	1	1	1	50	253	150
Rubber workers	2			240		
Shipbuilding	1			55		
Slaughtering and meat packing		2			73	
Stone workers		1	1		100	90
Municipal workers			1			55
Telegraph and telephone workers	1			50		
Textile workers	13	29	10	6,492	9,250	1,441
Tobacco workers	1		2	16		960
Other occupations	3	3	3	68	2,140	192
Total	77	109	80	14,052	32,963	20,881

## Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in May, 1929, classified by number of workers and by industries.

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN MAY, 1929, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIES

Industry	Number of disputes beginning in May, 1929, involving—				
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers
Bakers.....	1				
Barbers.....		1		1	
Building trades.....	2	18	8	6	2
Chauffeurs and teamsters.....	3	2	1		1
Clothing workers.....	1		2	1	
Furniture workers.....	1				
Hotel and restaurant employees.....		1			
Laundry workers.....			1		
Light, heat, and power employees.....	1	1			
Longshoremen and freight handlers.....	1				
Mining.....			4	1	
Motion picture operators, actors, and theatrical workers.....	1				
Printing and publishing.....			1		
Stone workers.....		1			
Municipal workers.....		1			
Textile workers.....		5	4	1	
Tobacco workers.....			1	1	
Other occupations.....		2	1		
Total.....	11	32	23	11	3

IN TABLE 4 are shown the number of industrial disputes ending in May, 1929, by industries and classified duration.

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN MAY, 1929, BY INDUSTRIES AND BY CLASSIFIED DURATION

Industry	Classified duration of strikes ending in May, 1929					
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 months and less than 3 months	3 months and less than 4 months	8 months and less than 9 months
Bakers.....	1					
Barbers.....	1					
Building trades.....	16	8	3		1	
Chauffeurs and teamsters.....	3	1				
Clothing workers.....	2					1
Hotel and restaurant employees.....	1					
Iron and steel workers.....		1				
Leather workers.....				1		
Light, heat, and power employees.....	2					
Metal trades.....		1	1			
Mining.....	3					
Motion-picture, operators, actors, and theatrical workers.....		1				
Stone workers.....	1					
Textile workers.....	8	1	7			
Tobacco workers.....	1					
Other occupations.....	1	1	1			
Total.....	40	14	12	1	1	1

## Principal Strikes and Lockouts Beginning in May, 1929

*Building trades, Missouri.*—A strike of building-trades employees began on May 1 in St. Louis and has interfered more or less seriously with building operations in that city. Approximately 4,200 workmen were originally involved, exclusive of 120 stonecutters, who, it is understood, returned to work on May 24 under the old wage scale. The iron workers, of which there were about 700 involved, demanded an increase from \$1.50 to \$1.75 an hour. The building laborers (including plumbers' laborers), numbering some 3,300, constituted the main group of strikers. Their old scale, it is said, ranged from 75 cents to 92½ cents an hour, and a flat rate of 90 cents an hour was demanded. About 200 plumbers' helpers demanded an increase from \$7.50 to \$8. A compromise was effected on June 12 of \$7.75 per day immediately and of \$8 after July 31. The laborers agreed on June 8 to resume work on a flat scale of 87½ cents an hour effective August 1. The ironworkers ratified a compromise agreement on June 21 which provides for payment beginning June 24 of a wage of \$13 per 8-hour day until May 1, 1930, when they will receive \$14. The agreement runs for two years and at the end of that period will be considered as automatically renewed for another year unless either party gives four months' notice before the expiration of the 2-year contract that a change is desired.

*Teamsters and chauffeurs, New York.*—Some 2,000 teamsters, chauffeurs, and yardmen in New York City are reported to have struck on May 1 for recognition of union, \$8 per day for drivers, and \$7 per day for helpers and yardmen, with a 9-hour day instead of 10, 11, and 12. According to press reports, about 800 workers employed by independent firms have been successful, but other firms, members of the masons' material dealers' association, have not acceded to the workers' demands. This strike, according to press reports, was called off and the men advised on June 8 to go back to work and deal individually with employers.

*Carpenters, New Jersey.*—Approximately 600 carpenters in Plainfield were on strike from May 1 to May 24 to secure a 5-day week and \$12 per day instead of a 5½-day week at \$11.20 per day. The new scale, it is understood, was allowed, but is not to take effect until August 31.

*Cleaners and dyers, California.*—Demanding a wage increase and union recognition, approximately 850 cleaners and dyers in Los Angeles struck on May 8. This strike is understood to have ended by May 9, recognition being allowed but wage adjustment to be taken up later.

*Bronze workers, New York.*—A strike of approximately 2,000 bronze workers, some of them members of the Architectural Iron and Bronze Workers' Union, New York City, struck on May 16 for higher wages and shorter hours. One of the largest firms involved is that of the General Bronze Co., with plants in Long Island City and Corona.

*Textile workers, South Carolina.*—Demanding a wage increase of 20 per cent, 600 employees of the Mills Cotton Mill No. 1, Greenville, are reported to have struck on May 31.

*Building trades workers, Ohio.*—To enforce demands for a 5-day week scale, 600 painters, plumbers, and electrical workers in Steubenville are reported to have struck on May 1. The new agreement was signed and the strike ended, it is understood, on May 4.



## Principal Strikes and Lockouts Continuing into May, 1929

*Restaurant and cafeteria workers, New York City.*—The strike of workers in the restaurants and cafeterias which began on April 4 is still in progress.

*Shoe workers, Massachusetts.*—The strike of shoe workers which began in Boston on April 8 has not yet terminated.

*Textile (rayon) workers, Tennessee.*—Following the issuance on May 24 by the president of the American Bemberg and the American Glanzstoff Corporation of an appeal to everybody to forget all feeling of resentment in an effort to unite again for the common good, the strike at these plants came to an official end on the afternoon of May 25, when the employees still on strike decided to return to work the following Monday in accordance with the plan of employment outlined by the head of the corporations.

*Textile workers, South Carolina.*—The strike at the Anerdson Cotton Mills which began April 4 ended, it is understood, with an agreement to return to work June 6 under a temporary allotment of looms with bonuses until a final settlement is reached.

## Strikes and Lockouts in the United States, 1916 to 1928

INITIAL information regarding industrial disputes in the United States is obtained by the Bureau of Labor Statistics chiefly from the following sources: Labor papers and trade-union journals; trade periodicals; lists of strikes issued by labor, trade, and other organizations; clipping bureaus; daily papers from the most important industrial cities in the United States; and reports of the Conciliation Service of the United States Department of Labor. All leads obtained are verified either by correspondence or through the conciliators of the Department of Labor or special agents of the Bureau of Labor Statistics. For the years 1926 to 1928, inclusive, data are shown only for disputes involving six or more workers and lasting for one day or more, no distinction being made between strikes and lockouts.

The number of disputes beginning in 1928 was materially less than for any of the other years covered by the bureau's compilations. This is shown by the statement below, giving index numbers (on the basis of 1916=100) of the disputes occurring each year.

Relative number of disputes		Relative number of disputes	
1916	100	1923	41
1917	117	1924	33
1918	88	1925	34
1919	96	1926	27
1920	90	1927	19
1921	63	1928	17
1922	29		

In Table 1 are shown for the year 1928 the number of disputes beginning and in effect at the end of each month, the number of workers involved, and the man-days lost. The number of man-days lost does not take into account whether or not men involved in strikes or lockouts were employed on other work during part or even the

entire period of a strike but is simply the product of the working-days' duration by the number of persons affected.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH IN 1928

Month	Number of disputes		Number of workers involved in disputes		Number of man-days lost during month
	Beginning in month	In effect at end of month	Beginning in month	In effect at end of month	
January.....	48	63	18,850	81,880	2,128,028
February.....	52	58	33,441	103,496	2,145,342
March.....	41	47	7,459	76,069	2,291,337
April.....	71	48	143,700	129,708	4,806,232
May.....	80	56	15,640	133,546	3,455,499
June.....	44	46	31,381	143,137	3,670,878
July.....	54	42	18,012	132,187	3,337,386
August.....	59	42	8,887	105,760	3,553,750
September.....	52	34	8,897	62,862	2,571,982
October.....	61	42	27,866	41,474	1,304,913
November.....	44	38	37,840	38,745	1,300,362
December.....	23	29	5,172	35,842	991,238

### Month of Occurrence, 1916 to 1928

IN TABLE 2 the number of strikes, month by month, over a period of 13 years may be compared. As previously observed in other reports, April and May are the months of greatest unrest.

TABLE 2.—NUMBER OF DISPUTES BEGINNING IN EACH MONTH

Year	Number of disputes beginning in—													Total
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Month not stated	
1916.....	188	206	294	434	617	354	313	326	252	261	197	149	198	3,789
1917.....	288	211	318	445	463	323	448	360	349	322	257	197	469	4,450
1918.....	191	223	312	321	392	296	288	278	212	145	208	250	237	3,353
1919.....	199	198	192	270	431	322	381	417	425	334	165	140	156	3,630
1920.....	280	214	288	427	422	317	298	264	231	192	106	108	264	3,411
1921.....	238	172	194	292	575	152	167	143	124	90	92	76	70	2,385
1922.....	131	96	75	109	104	64	101	95	85	64	64	43	81	1,112
1923.....	69	72	123	212	246	133	146	106	93	117	66	59	111	1,553
1924.....	102	70	118	144	155	98	89	81	71	74	61	40	146	1,249
1925.....	94	89	83	161	161	108	103	123	104	77	63	45	90	1,301
1926.....	62	74	84	127	141	73	84	98	85	60	48	33	66	1,035
1927.....	37	65	74	87	107	80	65	57	57	50	27	28	-----	734
1928.....	48	52	41	71	80	44	54	59	52	61	44	23	-----	629

## Place of Occurrence of Disputes

TABLE 3 GIVES the number of strikes or disputes by States and by geographical groups, showing the sections of greater industrial activity. As in 1927, over 50 per cent of these disputes occurred within three States (New York, Pennsylvania, and Massachusetts, and in 1928 nearly 75 per cent of the total number of disputes were reported in seven States (New York, Pennsylvania, Massachusetts, New Jersey, Illinois, Ohio, and California).

TABLE 3.—NUMBER OF DISPUTES BEGINNING IN EACH YEAR, BY STATE AND SECTION OF COUNTRY

State and section	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Alabama	15	20	13	18	25	15	4	6		3	5	1	
Alaska	3	5	3	3	1	1				2			
Arizona	7	20	4	7	9	4	1	1					
Arkansas	20	36	11	7	15	7	2	2	3	4			
California	55	112	94	102	120	99	37	47	29	40	34	20	16
Colorado	17	48	32	31	22	27	7	3	5	10	5	5	5
Connecticut	326	178	92	135	128	61	30	52	26	46	29	27	11
Delaware	12	17	14	11	10	4	1	1		4	8	2	
District of Columbia	8	14	13	10	14	5	4	6	5	11	6		2
Florida	9	16	20	30	9	19	5	4	2	10	16	6	2
Georgia	8	28	40	39	29	21	3	4	4	5	9	1	1
Idaho	5	32	10	10	5	3		1					
Illinois	159	282	248	267	254	164	63	72	80	84	72	44	40
Indiana	75	73	76	106	99	61	15	35	28	45	32	16	13
Iowa	26	65	41	57	47	42	15	14	15	12	14	6	8
Kansas	15	53	41	45	14	21	4	5	6	12	2	1	2
Kentucky	13	38	19	26	22	17	10	11	12	2	12	12	4
Louisiana	8	39	23	51	37	29	8	16	7	3	5	2	3
Maine	30	40	36	40	22	24	11	7	6	10	1	3	5
Maryland	48	59	72	41	57	27	12	19	25	17	7	9	8
Massachusetts	383	353	347	396	377	201	139	217	97	162	113	70	95
Michigan	71	64	60	84	63	71	18	19	10	14	12	7	7
Minnesota	30	53	40	49	50	45	9	14	4	5	9	11	3
Mississippi	4	13	5	2	4	9		1				2	
Missouri	97	122	105	69	63	54	26	27	35	11	9	14	8
Montana	15	77	33	23	16	21	2	7	1	1	4	3	2
Nebraska	21	28	11	17	12	11	3	1	2	2	1	2	
Nevada		2	7	5	4	1	3	1	1			1	
New Hampshire	20	20	17	34	32	6	30	6	8	5	8	4	4
New Jersey	417	227	138	183	145	125	71	78	92	92	84	59	46
New Mexico		4	2	4	1	2						1	
New York	592	711	689	536	600	384	202	403	281	301	216	181	131
North Carolina	8	7	14	22	21	26	6	6	4	7	2	7	1
North Dakota		2	3		4	8	2	1	1				
Ohio	290	279	197	237	206	167	73	65	68	73	68	21	27
Oklahoma	24	35	19	32	24	29	9	2	6	10	2	3	3
Oregon	23	58	18	38	22	23	8	15	13	5	8	10	6
Pennsylvania	574	494	311	280	250	222	101	234	261	184	162	123	113
Rhode Island	77	105	53	78	89	42	37	25	5	25	28	23	9
South Carolina	5	7	3	11	5	12	2	1	1		1		
South Dakota		3	3	3	5	3			1				
Tennessee	26	42	26	40	27	28	8	7	10	3	7	4	7
Texas	28	56	41	50	73	64	10	15	16	11	4	9	5
Utah	3	21	14	22	14	5	1	1	2	2		1	
Vermont	10	8	9	13	12	2	13			4	1	1	1
Virginia	16	35	37	28	31	14	5	3	4	1	3	1	3
Washington	58	294	130	113	69	63	22	36	15	15	5	9	13
West Virginia	40	64	50	63	49	28	8	28	23	20	11	3	
Wisconsin	63	57	54	77	68	41	21	10	15	14	8	3	8
Wyoming		2	5	4	6	4		1	1	1			3
Interstate	4	25	4	21	10	19	27	23	10	12	8	6	10
United States <sup>1</sup>	3,758	4,443	3,347	3,571	3,291	2,381	1,088	1,553	1,240	1,300	1,032	734	629
North of the Ohio and east of the Mississippi	3,186	3,034	2,406	2,678	2,431	1,607	840	1,249	1,007	1,091	869	587	520
South of the Ohio and east of the Mississippi	147	309	243	278	227	186	66	71	60	51	66	49	18
West of the Mississippi	421	1,075	634	594	623	569	155	210	163	146	89	92	81
Interstate	4	25	4	21	10	19	27	23	10	12	8	6	10

<sup>1</sup> Does not include strikes in Hawaii, Porto Rico, Canal Zone, and Virgin Islands.



New York City continues to lead all other cities in the number of strikes, and nearly one-third (32 per cent) of all strikes reported occurred in eight cities—New York, Boston, Philadelphia, Fall River, Lynn, Chicago, Cleveland, and Paterson. In Table 4, a comparison may be had of the number of disputes in cities where 25 or more occurred in any year, 1916 to 1928, inclusive.

TABLE 4.—NUMBER OF DISPUTES IN CITIES IN WHICH 25 OR MORE DISPUTES OCCURRED IN ANY YEAR

City	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Baltimore, Md.	39	36	47	26	34	22	9	15	23	15	4	7	7
Boston, Mass.	62	87	68	98	51	43	22	43	31	49	39	22	24
Bridgeport, Conn.	38	30	13	25	10	2	3	2	1	4	5	5	3
Buffalo, N. Y.	41	28	24	20	47	20	8	8	11	8	6	3	8
Chicago, Ill.	73	123	100	126	125	89	26	44	29	58	39	29	11
Cincinnati, Ohio	29	33	26	39	31	18	10	10	5	3	5		1
Cleveland, Ohio	60	76	39	47	41	26	22	13	16	20	15	5	10
Denver, Colo.	8	26	19	22	15	16	2	2	2	6	3	2	3
Detroit, Mich.	31	19	18	40	24	39	12	14	7	9	9	5	3
Fall River, Mass.	20	13	18	28	22	10	8	3	2	10	4	8	17
Hartford, Conn.	28	21	8	17	19	2	2	1	3	1	3	1	1
Holyoke, Mass.	26	9	17	18	15	3	1	8	1	3	5		
Jersey City, N. J.	28	24	7	25	14	9	9	5	7	6	7	2	3
Kansas City, Mo.	20	36	20	16	13	17	9	6	10	2	3	2	1
Lynn, Mass.	8	8	22	11	27	12	14	10	6	12	15	3	15
Milwaukee, Wis.	30	14	11	27	28	9	11	6	2	4	8		2
Newark, N. J.	55	50	36	33	16	23	6	13	11	15	7	4	9
New Orleans, La.	7	23	20	40	29	23	7	11	5	2	5	1	2
New York, N. Y.	363	484	484	370	341	193	140	296	204	228	133	127	90
Paterson, N. J.	18	27	20	15	12	17	14	16	21	12	7	5	10
Philadelphia, Pa.	74	89	80	60	59	61	21	32	54	37	30	23	22
Pittsburgh, Pa.	47	37	19	19	15	23	1	5	12	11	8	8	6
Providence, R. I.	21	46	18	31	32	17	6	5	2	8	14	9	2
Rochester, N. Y.	16	27	35	13	37	36	17	12	13	5	1	11	2
San Francisco, Calif.	23	37	30	34	26	22	7	14	4	11	7	7	2
St. Louis, Mo.	58	53	70	39	40	26	11	19	21	8	4	10	5
Seattle, Wash.	15	49	29	24	26	21	5	14	6	4	2	1	4
Springfield, Mass.	31	27	12	20	27	6	6	10	4	7	2		
Toledo, Ohio	16	16	27	24	20	15	3	8	3	2	3		1
Trenton, N. J.	25	15	11	4	21	5	1	3	3	4	2	2	1
Wilkes-Barre, Pa.	6	25	8	4	9	10	7	12	7	4	2	8	8
Worcester, Mass.	18	12	11	28	18	12	2	9	4	7	3	2	2
Youngstown, Ohio	27	1	5	14	4	6	4	5	1	4	6		1

### Sex of Persons Involved

TABLE 5 SHOWS, by years, the number of disputes which involved male workers only, female workers only, and those in which both males and females were concerned.

TABLE 5.—NUMBER OF DISPUTES BEGINNING IN EACH YEAR, BY SEX OF EMPLOYEES

Sex of persons involved	Number of disputes beginning in—												
	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Males only	3,121	3,611	2,467	2,818	2,347	1,750	676	983	877	891	831	587	450
Females only	122	158	90	88	78	30	22	31	23	31	33	15	15
Both sexes	269	190	278	521	343	558	357	445	280	338	150	132	164
Not reported	277	491	518	203	643	47	57	94	69	41	21		
Total	3,789	4,450	3,353	3,630	3,411	2,385	1,112	1,553	1,249	1,301	1,035	734	629

## Relation to Labor Unions

IN TABLE 6 the number of disputes in 1928 in which the workers were connected with unions at the time the dispute took place is seen to have been 534, or about 85 per cent. In 1916 only 65 per cent were of workmen connected with unions, in 1920, 73 per cent, while in recent years a higher percentage has been maintained.

TABLE 6.—RELATION OF WORKERS TO LABOR UNIONS

Relation of workers to union	Number of disputes												
	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Connected with unions	2,458	2,392	1,903	2,033	2,506	2,038	844	1,265	1,063	1,018	823	614	534
Not connected with unions	446	209	362	143	137	62	37	77	69	142	93	67	66
Organized after dispute began	71	55	26	30	8	5	5	18	14	16	19	16	4
Union and nonunion workers							12	29	31	38	15	5	4
Not reported	814	1,794	1,062	1,424	760	280	214	164	72	87	85	32	21
Total	3,789	4,450	3,353	3,630	3,411	2,385	1,112	1,553	1,249	1,301	1,035	734	629

## Causes of Disputes

IN TABLE 7 ARE given the principal causes of disputes grouped according to their apparent importance.

TABLE 7.—PRINCIPAL CAUSES OF DISPUTES BEGINNING IN EACH YEAR

Cause of dispute	Number of disputes beginning in--												
	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Increase of wages	1,301	1,571	1,397	1,115	1,429	120	156	445	255	277	260	142	98
Decrease of wages	35	36	36	36	147	806	261	49	125	117	52	57	53
Increase of wages and decrease of hours	481	378	256	578	269	34	16	58	30	29	39	43	27
Decrease of wages and increase of hours						77	40		7	4	1	1	1
Other causes involving wages	96	115	93	110	121	55	76	144	96	97	101	85	113
Decrease of hours	113	132	79	117	62	294	22	16	18	7	19	20	6
Increase of hours	7	18	6	25	8	18	12	5	5	6	4	3	3
Other causes involving hours	3	18	2	5	2	7		4	1		2	9	5
Recognition of unions	404	333	241	522	308	191	137	153	152	109	117	119	71
Recognition and wages	93	132	79	78	87	106	10	37	21	30	11	20	22
Recognition and hours	20	27	16	16	6	14	3	6	1	1		2	2
Recognition, wages, and hours	56	48	49	76	45	11	8	25	7	4	13	7	14
Recognition and other conditions	4	13	7	14	6	6	6	8	9	1	4	23	16
General conditions	68	116	93	123	116	83	72	80	79	89	66	47	17
Discharge of employees	144	246	192	163	170	45	44	79	54	74	61	50	58
Unfair products	7	9	1	5	30	27	18	7	8	4	16	3	7
Sympathy	33	71	35	108	67	36	33	31	22	39	29	23	8
Jurisdiction and protest	19	21	16	16	20	10	10	13	23	59	17	13	33
Other conditions	274	374	294	223	213	192	125	310	228	254	175		75
Not reported	631	792	461	250	305	163	63	83	108	100	48	67	
Total	3,789	4,450	3,353	3,630	3,411	2,385	1,112	1,553	1,249	1,301	1,035	734	629

As indicated in Table 7, the major causes of disputes were wages, hours, and union recognition. Disputes involving the question of wages only, hours only, or recognition only, formed 37 per cent of all disputes reported in 1928. If those controversies be included in which these three causes were one factor only or one factor combined with other reasons causing the dispute, these three causes alone or in combination were responsible for 69 per cent of all disputes shown for the year 1928.

	Number of disputes	Per cent of total num- ber of dis- putes
Wages only.....	151	24
Hours only.....	9	2
Recognition only.....	71	11
Wages, hours, or recognition.....	231	37
Wages alone, and wages combined with any other cause.....	328	52
Hours alone, and hours combined with any other cause.....	58	9
Recognition alone, and recognition combined with any other cause.....	125	20
Total (eliminating duplications).....	431	69

*Jurisdiction and protest.*—In this classification are included strikes which are perhaps best known as protest strikes. They are seldom productive of any result and are usually of very short duration. Frequently they are cases in which the workmen walked out or remained out for a day in protest against a foreman or, perhaps, against an offensive regulation. Such strikes are classified with jurisdictional disputes.

### Size of Disputes

THE NUMBER OF persons involved in disputes is classified in Table 8, while Table 9 gives the number of disputes in which the number of workers was reported, the aggregate number of workers, and the average number per dispute, for the years 1916 to 1928, inclusive.

TABLE 8.—NUMBER OF DISPUTES BEGINNING IN EACH YEAR, BY CLASSIFIED NUMBER OF PERSONS INVOLVED

Number involved	Number of disputes beginning in—												
	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
1 to 10.....	210	171	152	186	161	257	80	128	125	142	60	83	61
11 to 25.....	355	304	279	297	322	336	128	182	120	167	153	158	155
26 to 50.....	427	350	343	353	349	287	156	206	145	195	105	137	126
51 to 100.....	420	361	357	404	367	352	159	157	114	166	124	112	82
101 to 250.....	399	368	384	494	381	245	144	161	119	147	119	106	71
251 to 500.....	354	287	287	356	289	164	91	135	93	97	96	60	47
501 to 1,000.....	241	194	143	217	145	103	61	78	81	52	66	45	34
1,001 to 10,000.....	238	223	204	332	184	133	61	119	78	43	58	31	49
Over 10,000.....	23	68	17	54	19	15	16	5	13	3	2	2	4
Not reported.....	1,122	2,124	1,187	937	1,194	593	216	382	361	289	252	-----	-----
Total.....	3,789	4,450	3,353	3,630	3,411	2,385	1,112	1,553	1,249	1,301	1,035	734	629



TABLE 9.—NUMBER OF DISPUTES FOR WHICH NUMBER OF EMPLOYEES IS REPORTED, AND TOTAL AND AVERAGE NUMBER INVOLVED

Year	Disputes in which number of employees is reported			Year	Disputes in which number of employees is reported		
	Number of disputes	Number of employees	Average number of employees per dispute		Number of disputes	Number of employees	Average number of employees per dispute
1916.....	2,667	1,599,917	600	1922.....	899	1,612,562	1,794
1917.....	2,325	1,227,254	528	1923.....	1,199	756,584	631
1918.....	2,151	1,239,989	576	1924.....	898	654,641	729
1919.....	2,665	4,160,348	1,561	1925.....	1,012	428,416	423
1920.....	2,226	1,463,054	657	1926.....	783	329,592	421
1921.....	1,785	1,099,247	616	1927.....	734	349,434	476
				1928.....	629	357,145	568

Because of the difficulty in defining establishment, the information in Table 10 is not always quite accurate. The bureau has defined establishment as work place rather than as a company.

TABLE 10.—NUMBER OF ESTABLISHMENTS INVOLVED

Establishments involved	Number of disputes											
	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
One.....	3,078	2,541	2,136	1,989	1,071	745	1,133	820	898	649	453	427
Two.....	143	70	142	86	113	28	56	34	60	25	36	24
Three.....	73	42	99	59	94	17	35	23	25	23	18	20
Four.....	41	23	59	40	62	17	15	16	24	10	16	18
Five.....	18	90	52	35	43	9	10	17	12	14	14	17
Over five.....	403	327	910	426	584	104	103	84	98	94	163	95
Not reported.....	694	260	232	776	418	192	201	255	184	219	34	28
Total.....	4,450	3,353	3,630	3,411	2,385	1,112	1,553	1,249	1,301	1,035	734	629

### Industries and Occupations Involved in Labor Disputes

THE NUMBER OF workers involved in the principal industries in which strikes occurred in 1927 and 1928 are shown in Table 11. The building trades show only 35 per cent as many men on strike in 1928 as in 1927, while there were more than four times as many clothing workers and nearly four times as many textile workers involved in strikes in 1928 as in 1927. Unrest in coal mining continued in 1928, but to a slightly lesser degree.

TABLE 11.—NUMBER OF PERSONS DIRECTLY INVOLVED IN INDUSTRIAL DISPUTES, 1927 AND 1928, BY INDUSTRY

Industry	1927	1928	Industry	1927	1928
Building trades.....	56,249	19,965	Printing and publishing.....	1,247	487
Clothing.....	14,262	65,686	Shipbuilding.....		830
Furniture.....	1,906	618	Slaughtering, meat cutting, and packing.....	220	752
Iron and steel.....	490	346	Stone work.....	227	2,103
Leather.....	974	196	Textiles.....	9,328	35,284
Lumber.....	1,046	598	Tobacco.....	472	59
Metal trades.....	1,152	1,266	Transportation, steam and electric.....	100	364
Mining, coal.....	225,921	195,876			
Paper manufacturing.....	15	1,301			

Table 12 shows the number of disputes in the years 1916 to 1928 in the principal industry groups.

TABLE 12.—NUMBER OF DISPUTES IN SELECTED INDUSTRY GROUPS

Industry	Number of disputes												
	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Building trades.....	394	468	434	473	521	583	113	208	270	349	272	194	134
Clothing.....	227	495	436	322	336	240	240	395	238	231	194	129	124
Furniture.....	50	43	26	35	26	17	4	12	35	56	46	41	25
Iron and steel.....	72	56	74	76	25	25	10	10	7	7	2	2	2
Leather.....	34	19	16	27	32	26	17	17	5	5	11	12	5
Lumber.....	44	209	76	46	38	25	10	19	6	9	3	3	7
Metal trades.....	547	515	441	581	452	194	83	113	58	48	75	19	28
Mining, coal.....	373	355	162	148	161	87	44	158	177	100	78	60	88
Mining, other.....	43	94	46	28	22	8	5	1	1	4			
Paper manufacturing.....	54	41	40	47	39	42	12	16	6	6	10	1	2
Printing and publishing.....	27	41	40	71	83	506	56	19	12	14	9	22	10
Shipbuilding.....	31	106	140	109	45	20	4	6	1				2
Slaughtering, meat cutting, and packing.....	70	38	42	74	42	30	6	11	14	2	5	5	4
Stone.....	61	26	14	13	29	34	61	15	15	17	11	4	8
Textiles.....	261	247	212	273	211	114	115	134	80	139	90	80	65
Tobacco.....	63	47	50	58	38	19	13	16	12	4	14	3	2
Transportation, steam and electric.....	228	343	227	191	241	37	67	31	18	7	8	1	3

The number of disputes in selected occupations is shown in Table 13, by years, from 1916 to 1928.

TABLE 13.—NUMBER OF DISPUTES IN SPECIFIED OCCUPATIONS, BY YEARS

Occupation	Number of disputes												
	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Bakers.....	81	106	47	88	75	99	24	35	72	55	14	8	10
Boiler makers.....	23	44	28	31	22	16	4	9	3	5	4		
Boot and shoe workers.....	45	38	50	54	63	28	55	53	27	31	25	13	34
Brewery workers.....	21	22	27	23	25	24	12	4	10	6	2	2	2
Brick and tile workers.....	23	9	5	16	21	12	14	6	8	13	7	1	
Building laborers and hod carriers.....	54	74	27	49	90	10	7	39	19	35	26	22	18
Carpenters.....	75	101	81	96	73	49	20	22	34	50	27	22	35
Chauffeurs and teamsters.....	108	164	129	95	130	43	20	51	39	44	22	25	16
Freight handlers and longshoremen.....	158	194	89	58	68	36	18	23	12	10	7	3	1
Glass workers.....	41	23	13	9	11	2	4	14	7	8	6	10	4
Hat and cap and fur workers.....	26	52	38	38	51	25	40	25	34	25	32	19	12
Inside wiremen.....	32	33	45	33	51	29	7	9	18	16	17	12	10
Machinists.....	257	204	207	202	127	29	8	13	6		15		1
Metal polishers.....	43	25	29	61	78	8	3	4	10	8	10	3	6
Miners, coal.....	373	355	162	148	161	87	44	158	177	99	78	60	83
Molders.....	145	156	110	181	145	93	38	54	29	13	21	12	15
Painters and paper hangers.....	46	45	61	81	46	62	10	20	25	29	22	23	10
Plumbers and steam fitters.....	53	53	72	55	81	82	21	25	42	55	38	28	23
Rubber workers.....	38	19	15	15	14	3	3	7	2	6	2	2	2
Sheet-metal workers.....	23	33	45	19	14	82	8	13	18	9	18	6	3
Street railway employees.....	56	118	117	110	81	12	19	21	14	5	8	2	3
Structural-iron workers.....	23	16	20	15	32	5	6	18	13	16	12	10	13
Tailors.....	38	59	51	70	42	58	19	32	11	22	16	14	6

## Termination of Disputes, by Month, and Result

TABLE 14 shows the number of disputes ending each month, for each year, 1916 to 1928.

TABLE 14.—NUMBER OF DISPUTES ENDING IN EACH MONTH

Year	Number of disputes ending in—													Total
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Month not stated	
1916.....	117	132	176	292	337	216	200	217	223	173	156	78	131	2,448
1917.....	111	94	159	198	223	172	157	156	201	177	122	132	172	2,074
1918.....	105	125	168	208	261	223	211	207	175	147	117	166	85	2,198
1919.....	122	113	128	144	226	195	207	252	239	194	147	120	133	2,220
1920.....	84	85	129	197	200	188	191	157	155	117	72	60	237	1,872
1921.....	64	61	106	102	222	171	144	141	91	81	65	46	232	1,526
1922.....	42	39	37	37	77	52	58	65	70	58	61	53	92	741
1923.....	32	54	78	144	182	114	121	85	85	95	57	36	62	1,145
1924.....	69	78	92	90	129	109	83	62	55	69	47	43	33	959
1925.....	68	66	65	110	131	93	71	111	81	92	57	34	10	989
1926.....	33	46	62	76	111	73	60	77	59	51	37	18	18	780
1927.....	19	38	51	64	80	82	88	65	54	37	35	26	-----	639
1928.....	41	57	52	70	72	54	58	59	60	53	48	32	-----	656

Of the 656 disputes ending in 1928, Table 15 shows that 272, or 41 per cent, resulted in favor of employers. This is a much higher proportion than in 1927, when only 26 per cent were so reported. The number settled in favor of employees in 1928 was 197, or 30 per cent, while the number compromised was 160, or 24 per cent.

Jurisdictional and protest strikes have increased to such an extent in recent years that it is felt that the number of such disputes may prove interesting, and for this reason has been added to this table. A jurisdictional dispute is one in which trades or occupations are directly involved, one against another. As far as the employer is concerned, they are often more disastrous than the dispute in which he is immediately affected. A protest strike is one which, as its name indicates, simply expresses dislike for some rule, executive, or condition. It is usually of very short duration and frequently is officially unauthorized.

TABLE 15.—RESULTS OF DISPUTES ENDING IN EACH YEAR

Result	Number of disputes ending in—													
	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	
In favor of employers.....	748	395	465	687	677	701	248	368	283	253	226	169	272	
In favor of employees.....	749	631	627	627	472	256	259	403	354	349	288	235	197	
Compromise.....	777	720	691	797	448	291	105	168	138	138	147	129	160	
Employees returned pending arbitration.....	73	137	204	50	61	80	16	46	45	51	36	29	3	
Jurisdictional and protest.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	14	
Not reported.....	101	191	211	59	214	198	113	160	139	198	83	77	110	
Total.....	2,448	2,074	2,198	2,220	1,872	1,526	741	1,145	959	980	780	639	656	

<sup>1</sup> Results of seven strikes undetermined.



## Duration of Disputes

TABLE 16 shows the number of disputes ending in 1928 and their total and average duration.

TABLE 16.—NUMBER OF DISPUTES FOR WHICH DURATION IS KNOWN, AND TOTAL AND AVERAGE DURATION

Year in which disputes ended	Number of disputes for which duration is reported	Total duration (days)	Average duration (days)	Year in which disputes ended	Number of disputes for which duration is reported	Total duration (days)	Average duration (days)
1916.....	2,116	49,680	23	1923.....	968	23,177	24
1917.....	1,435	26,981	19	1924.....	957	28,588	30
1918.....	1,709	29,895	17	1925.....	879	23,809	27
1919.....	1,855	62,930	34	1926.....	738	18,805	25
1920.....	1,321	51,893	39	1927.....	669	15,865	24
1921.....	1,258	64,231	51	1928.....	656	17,997	27
1922.....	580	21,436	37				

Table 17 shows the classified days of duration of disputes ending each year, 1916 to 1928, inclusive.

TABLE 17.—DISPUTES ENDING IN EACH YEAR AFTER CLASSIFIED PERIODS OF DURATION

Duration	Number of disputes ending in—												
	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Less than 1 day.....	38	88	84	29	31	32	18	26	23	42			
1 day.....	141	196	145	76	57	27	48	82	42	55	51	61	95
2 days.....	185	113	171	70	64	44	39	74	46	52	47	38	56
3 days.....	147	105	127	80	54	44	27	68	31	62	42	49	50
4 days.....	125	62	111	78	51	47	23	66	46	39	32	22	39
5 days.....	131	56	72	74	36	35	26	36	27	34	34	29	27
6 days.....	112	65	67	45	44	32	18	44	30	26	30	45	44
7 days.....	93	95	115	69	66	45	34	62	47	47	48	17	14
8 days.....	86	29	60	72	45	30	19	29	21	24	13	18	13
9 days.....	50	31	38	33	30	19	10	26	14	27	21	19	11
10 days.....	108	43	58	57	31	44	15	20	17	23	25	18	21
11 days.....	41	24	24	30	28	19	5	16	17	19	12	24	15
12 days.....	42	39	26	28	24	12	6	17	6	21	10	29	21
13 days.....	27	13	16	30	21	14	10	32	12	14	6	16	12
14 days.....	64	40	49	42	40	25	9	36	26	33	19	10	7
15 to 18 days.....	148	75	88	113	83	76	41	54	39	60	34	30	36
19 to 21 days.....	83	46	72	95	25	49	27	39	23	47	20	21	13
22 to 24 days.....	40	23	40	51	41	16	15	12	17	36	20	18	12
25 to 28 days.....	61	35	32	65	56	31	9	33	39	28	25	23	21
29 to 31 days.....	53	28	65	74	47	43	9	40	27	23	25	22	14
32 to 35 days.....	25	27	31	61	21	36	13	20	23	17	25	26	9
36 to 42 days.....	50	38	39	81	46	54	14	14	26	2	24	19	21
43 to 49 days.....	24	29	36	78	48	40	14	13	26	18	22	20	11
50 to 63 days.....	53	37	48	124	69	86	29	24	43	32	21	28	23
64 to 77 days.....	40	22	18	72	51	60	18	24	27	12	15	16	12
78 to 91 days.....	27	12	17	57	41	61	14	16	12	9	8	5	14
92 to 200 days.....	99	55	35	149	125	186	51	25	55	39	25	15	30
Over 200 days.....	23	9	24	22	46	51	15	19	22	15	5	1	15
Not reported.....	332	639	489	365	551	268	165	178	174	114	93		
Total.....	2,448	2,074	2,198	2,220	1,872	1,526	741	1,145	959	989	752	639	656

## Arbitration

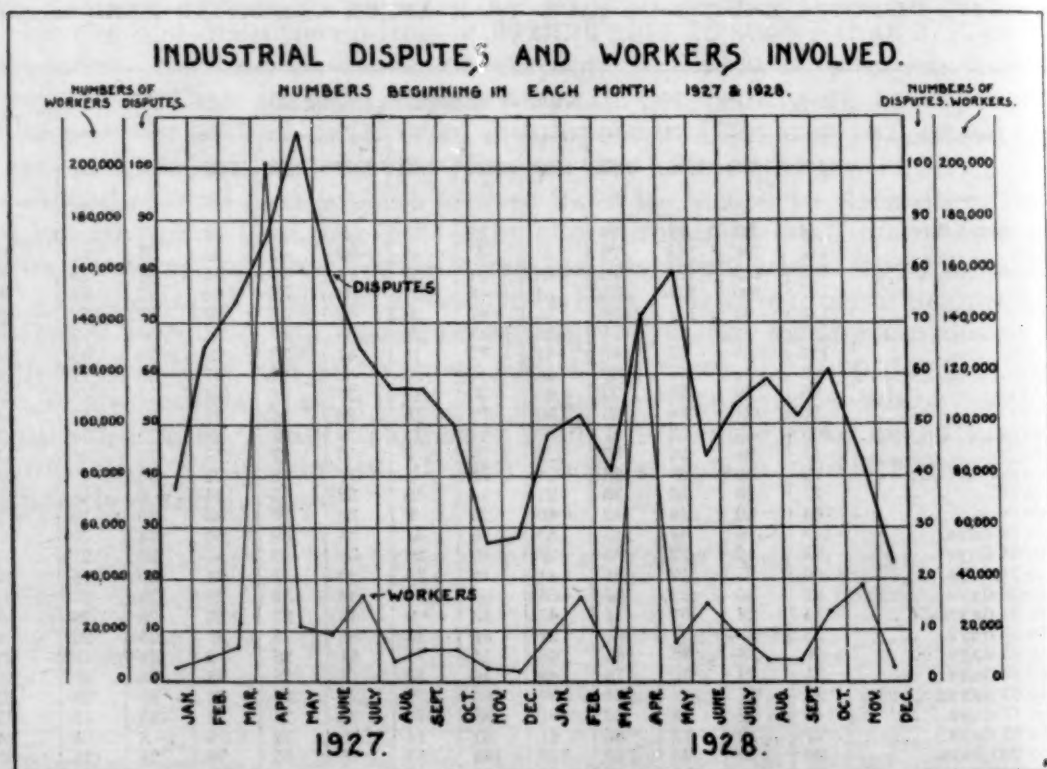
THE METHOD OF settling disputes by arbitration has become so popular within the past few years that a brief showing of those trade groups chiefly concerned in this choice of adjustment, together with

the number of strikes and workers concerned, is here given for the year 1928.

Of the 656 disputes (involving 402,706 workers) ending in 1928, the statement below shows that 130 or 20 per cent of the total number of disputes were settled by arbitration. While only 17,024 or slightly more than 4 per cent of the total number of workers were included in these settlements, it is felt that the small percentage of workers is not significant.

	Number of dis- putes	Number of workers involved
Building trades.....	47	7,884
Clothing.....	25	2,324
Metal trades.....	6	185
Miners.....	5	3,591
Motion-picture operators, actors, and theatrical workers.....	7	133
Textiles.....	9	968
Other groups.....	31	1,939
Total.....	130	17,024

In order to compare 1927 with 1928 graphically, a chart is herewith submitted giving both the number of disputes and the number of workers involved. Figures for this chart are taken from Table 1.



#### Principal Strikes and Lockouts Beginning in 1928

*Shoe workers, Massachusetts.*—On January 19 a strike of shoe workers began in Haverhill, involving directly 5,000 to 6,500 persons and about 78 shops. In addition, several thousand other employees were thrown out of employment. The strike was in protest against a reduction by the manufacturers in the wage scale for 1928 ranging, as alleged, from 10 to 30 per cent.

Some of the employing companies were members of the Haverhill Shoe Manufacturers' Association.

On January 20 it was announced that about 1,500 of the striking workers had returned after 13 independent factories had agreed to pay the 1927 scale, and by January 24 it was announced that a total of 36 independent shops, employing more than 50 per cent of the strikers, had agreed to pay that scale.

The strike was settled on the afternoon of January 29, when the manufacturers agreed to restore the 1927 scale. They also agreed to return the amount deducted since January 1, 1928.

*Cleaning and dyeing, New York.*—A strike was begun on February 20, fostered by the Allied Council of Cleaners and Dyers, which centered principally in the five boroughs of New York City, but also included some adjacent districts. About 25,000 workers of both sexes were reported as involved, also 15,000 retail and 90 wholesale plants. The strike was inaugurated, it was stated, for purposes of "organization, to end cutthroat competition, and stabilize the industry." This strike was reported as partially successful by March 5, but as still in effect against those wholesalers and retailers who had not settled on the terms demanded.

Peaceful relations were restored and the strike was about over, it is understood, by March 10, through the signing of an agreement by several large groups in the cleaners and dyers' trade, establishing conditions satisfactory to employees.

*Bituminous coal miners.*—The suspension of April 1, 1928, of about 100,000 miners in the States of Illinois, Indiana, Iowa, and the southwestern districts, including Arkansas, Kansas, Missouri, and Oklahoma, followed a temporary renewal of operations in those States in October, 1927, under the old Jacksonville scale, pending a permanent settlement by commissions representing miners and operators, which was unsuccessful. By October 1, 1928, this second phase of the major suspension of April 1, 1927, had terminated through district settlements, the United Mine Workers having receded on July 18, 1928, from its contention for the maintenance of the Jacksonville scale and extended to each of its districts the right to effect settlements with coal operators upon a basis mutually satisfactory.

No general settlements were ever announced for the other States affected by the original suspension of April 1, 1927.

In Ohio an agreement applying to about 3,000 miners was effected on August 23 with the Central Ohio Coal Operators' Association, but this agreement covered only a small proportion of the miners of that State.

*Textile operatives, Massachusetts.*—A general strike, on April 16, of cotton-textile operatives in New Bedford resulted from an announcement, on April 9, of the cotton manufacturers of that city (represented by the New Bedford Cotton Manufacturers' Association) that a general wage reduction of 10 per cent would become effective on the former date.

The New Bedford Textile Council, composed of representatives of the seven local textile unions, affiliated with the American Federation of Textile Operatives, opposed the wage reduction and directed the locals to hold meetings to ballot on the question of striking in protest, there being about 8,000 accredited members of the locals affiliated



with the council. The vote of the union membership was overwhelmingly in favor of striking.

This proved to be one of the largest and longest strikes the textile industry has ever faced, involving as it did 26 plants and approximately 25,000 workers of both sexes. An unusual feature of the strike was the fact that only about one-third of the strikers were organized.

After the strike began the local unions involved voted to amalgamate with the United Textile Workers, an organization which is affiliated with the American Federation of Labor.

On October 6 the unions voted to accept a compromise proposal suggested by the local citizens' mediation committee and the State Board of Conciliation and Arbitration providing for a 5 per cent wage cut, coupled with the assurance that in the future 30 days' notice of any wage change would be given the operatives.

Nearly all the mills resumed operations on October 8, with reduced forces.

*Artists' models and manikins, Illinois.*—About 4,650 artists' models and manikins in Chicago, consisting mostly of girls, began a strike on June 10 for "better working conditions, more wages, and above all decency and real moral environment." The strike involved 356 establishments and ended, it appears, successfully, June 25. The terms of settlement included a flat rate of \$3 per hour and not more than 5 working hours per day, with a rest period of 15 minutes in every hour on ordinary posing and rest periods every 8 minutes in difficult posing. The day's work is to be in two sections of two and one-half hours each, with a 2-hour interval between. Before the strike the average wage had been \$1 for the first hour and 50 cents for each hour following, and the average hours 12 per day.

*Clothing workers, New York.*—According to press reports, 8,000 clothing workers in about 400 men's clothing shops in New York City were ordered to stop work on June 26 by the joint board of the Amalgamated Clothing Workers of America, pending an agreement by the manufacturers "to live up to the union contract and to grant a system of unemployment insurance."

This strike or stoppage, it is understood, ended successfully by June 28.

*Anthracite coal miners, Pennsylvania.*—Operations of the Lehigh Coal & Navigation Co.'s collieries in the Panther Creek Valley were tied up from July 5 to 9 by an unsuccessful and "illegal" strike of 5,214 miners. The strike was in protest against suspension by the company, as an economy measure, of certain operations during the slack season through July.

The miners demanded that the company divide the working time of the miners at the affected mines among the other collieries, if the management was unable to sell the full output of the mines. The company appealed to the men to return to work and observe the spirit of the agreement which binds the United Mine Workers with the Anthracite Operators' Association.

The district president of the United Mine Workers upheld the coal company's stand not to meet with grievance committees of the strikers while an illegal walkout was in progress and ordered the men to return to work.

*Collar makers, New York.*—The firm of Cluett, Peabody & Co., collar manufacturers, Troy, N. Y., was affected by a strike of approximately 1,000 of its employees from July 9 to July 12, because of a temporary disagreement as to the method or rate of pay. For economic reasons the company undertook to make a necessary rate adjustment and felt that the so-called Bedeaux system was the best plan to use for this purpose, but the employees objected, fearing that the new system, which involved the payment of a basic rate for a specified number of collars and an additional "bonus" rate for all collars produced beyond the specified number per day would in effect mean a wage cut. However, they agreed to the rate adjustment by the company, but requested that the straight piece-rate system be retained, and this was done. The suspension was unusual in that the employees, although reporting at the plant each day, refrained from working.

*Anthracite coal miners, Pennsylvania.*—Demanding that an assistant foreman be discharged for an alleged assault on a motorman during an argument, 2,010 employees of the Susquehanna Collieries Co. unsuccessfully struck from July 11 to July 14. They returned to work pending further consideration of the grievance with the district officers.

Maxwell Colliery No. 20, of the Lehigh & Wilkes-Barre Coal Co., was reported as involved in an unsuccessful strike of 1,467 miners from July 11 to July 24, because of working conditions affecting 36 men, 2 of whom refused to be shifted from work "on a consideration basis" to other employment on the "contract basis."

*Barbers, New York.*—Approximately 2,000 barbers on the east side of Manhattan, New York City, were on strike for unionization purposes from August 8 to August 13. About 800 shops were involved in this strike, which resulted, it is said, in a partial victory for the union.

*Anthracite coal miners, Pennsylvania.*—An 8-day strike of 1,438 miners in the Underwood colliery of the Pennsylvania Coal Co. ended with the resumption of operations on August 21. The cause of this strike was reported as "failure to promptly negotiate a new wage scale covering second and third Dunmore veins, No. 1 shaft" of the colliery. The men voted to leave the settlement of their grievances to the president of District 1, United Mine Workers, and a committee representing the workers, members of the Underwood colliery local of the Pennsylvania Coal Co.

*Bituminous coal miners, Illinois.*—The No. 2 mine of the Chicago, Wilmington & Franklin Coal Co., at Orient, Ill., was affected by a "wildcat" strike of 1,300 miners from October 8 to October 13, because of conditions affecting 80 loaders. The miners objected "to a division of time which was required for a period of two weeks while additional mine cars and locomotives were being obtained, which had been on order for some time but which the manufacturer failed to ship on time. It was not possible to employ the above 80 men steadily and they had to lose one day out of every eight working-days until such time as the equipment arrived."

This strike did not have the support of the union leaders and the men returned to work under conditions that formerly prevailed.

*Express workers, New York.*—A strike of approximately 7,000 employees (platform men, clerks, teamsters, and chauffeurs) of the American Railway Express Co., began in New York City and vicinity shortly before midnight of October 9 and ended on the night of October 11, having lasted about two days.

The demand was for recognition of the Brotherhood of Railway and Steamship Clerks as the representative of the workers named. The men resumed work pending the outcome of conferences between representatives of the union and the company, which were successful from the union standpoint.

*Silk workers, New Jersey.*—Silk workers in Paterson began a strike on October 10 to enforce demands relative to wages, union recognition, and hours of labor. The demands as to wages were for an average increase, it is said, of 10 per cent. Approximately 1,300 workers quit work on the morning of the date mentioned, but subsequent stoppages brought the total number of strikers up to about 3,000, most of whom were silk weavers. Of something like 150 establishments involved, some were members of the Broadsilk Manufacturers' Association. Some of the workers were members of the Associated Silk Workers, by whom the strike had been fostered.

The first of the settlements embodying the union demands was effected on October 13 when the Belfield Silk Co., employing 40 workers, signed an agreement providing for an 8-hour day, a revised wage schedule, and recognition of the union. Similar settlements were made from time to time with other mills, so that by the end of October press reports showed that 128 plants had settled and about 1,700 strikers had returned to work.

The strike was officially declared ended by the Associated Silk Workers of America in a published announcement on January 2, 1929, about three-fourths of the workers having reached, by the end of December, satisfactory settlements with their employers, who agreed to the 8-hour workday, revised uniform wage schedule, and recognition of the union.

*Bituminous coal miners, Wyoming.*—After a scale committee representing both the operators and miners in southern Wyoming had worked out a new agreement similar to the new agreement adopted in Illinois, approximately 1,300 miners in the Rock Springs district ceased work because of objection to a reduced wage scale.

The strike lasted from October 16 to October 19, work being resumed under the old scale, pending a referendum vote. This vote was taken on October 29 and failed to carry. The men continued at work, pending further negotiations.

*Shoe workers, Massachusetts.*—In protest against reductions in wages ranging from 9 to 20 per cent, as recommended by the State board of conciliation and arbitration, 500 shoe workers, members of Local No. 289, Boot and Shoe Workers' Union, at five shoe factories in Lynn went on strike November 20. The affected companies, members of the Lynn Shoe Manufacturing Bureau, were the Unity Shoe Co., Strout, Stritter & Co. (Inc.), Standard Shoe Co., Washington Shoe Co., and the Walden & Perry (Inc.). The companies have an agreement with the union that was planned to prevent strikes and lockouts. Many operatives in the city, whose work depends on pro-



cesses usually done by the strikers, were forced into idleness, so that the strike affected some 3,000 other shoe workers.

The strike was reported to be unauthorized or "illegal," being a violation of agreement.

Walden & Perry (Inc.) and the Washington Shoe Co. agreed not to enforce the reductions, and the strikers returned to work at these plants November 22. The Standard Shoe Co. resumed operations November 24, after granting the strikers' demands for continuance of the old wage scale. Employees of the Unity Shoe Mfg. Co. (Inc.), which was preparing to leave the city, returned to work November 28, accepting a temporary decrease, but with the understanding that the matter was to come up before the board again. Employees of Strout, Stritter & Co. (Inc.) also returned on November 28, the company having waived the decision of the board.

*Bituminous coal miners, Montana.*—A suspension of coal mining in Montana, of district 27 of the United Mine Workers, from December 6 to 14, involving 2,000 workers, resulted from the rejection by the miners, on a referendum vote, of a new wage agreement which had been negotiated between the scale committee of the operators and miners.

The operators refused to reconsider the scale and on a second referendum vote of the miners on December 14 the agreement was ratified.

Work was resumed at some of the mines on December 15 and all mines were in operation, it is understood, on Monday, December 17.

The new agreement carries reductions of \$1.20 on the inside day wage scale and \$1.05 on the outside day wage scale, etc.

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## Conciliation Work of the Department of Labor in May, 1929

By HUGH L. KERWIN, DIRECTOR OF CONCILIATION

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 84 labor disputes during May, 1929. These disputes affected a known total of 133,779 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

On June 1, 1929, there were 65 strikes before the department for settlement and in addition 22 controversies which had not reached the strike stage. The total number of cases pending was 87.

## LABOR DISPUTES REPORTED DURING THE MONTH OF MAY, 1929

Company or industry, and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved—	
					Beginning	Ending	Directly	Indirectly
Lathers, Niagara Falls, N. Y.	Strike	Lathers	Wage dispute.	Adjusted. Allowed \$1 increase; \$12 per day.	1929 May 1	1929 May 1	40	15
Plumbers and steam fitters, Terre Haute, Ind.	do.	Building	Cutting and threading of pipe on job.	Adjusted. Small pipes cut on job; others cut in shops.	do.	May 3	40	---
Medical Arts Building and Terminal Building, Cleveland, Ohio.	do.	Marble setters' helpers.	Asked \$1 per hour; 10 cents increase.	Adjusted. Allowed 95 cents per hour Apr. 1, 1929; additional 5 cents Apr. 1, 1930.	do.	May 15	75	330
Capitol Theater, Shenandoah, Pa.	do.	Film operators	Wages and reduction of working force.	Pending.	do.	---	3	---
Ice-wagon drivers, Lynn, Mass.	Threatened strike.	Drivers	Asked 60-hour week; other conditions.	Unclassified. Allowed 60-hour week; \$35 to \$37 per week.	do.	May 1	100	---
Mazer-Cressman (Inc.), Columbus, Ohio.	Strike	Cigar makers	Wage cut to 40 cents per 100.	Adjusted. Returned on company's terms.	May 2	May 6	160	---
General Builders' Supply Corporation, New York City.	do.	Teamsters	Proposed \$48 per week and 9-hour day.	do.	May 1	June 10	2,000	350
Stoutt Co., Connorsville, Ind.	do.	Metal polishers	Company asked all to resign from union.	Unable to adjust.	do.	May 3	21	100
Building trades, Steubenville, Ohio.	do.	Building trades	Asked 5-day week.	Unclassified. Signed agreement before arrival of commissioner.	do.	May 4	600	---
Barbers, Steubenville, Ohio.	do.	Barbers	Asked wage increase and shorter hours.	Unclassified. No change in hours or wages.	do.	do.	40	---
Building trades, Kokomo, Ind.	Threatened strike.	Building trades	Nonunion hod carriers.	Adjusted. Agreement concluded.	May 3	May 9	33	250
Carpenters, Erie, Pa.	do.	do.	Asked 5-day week and \$1.25 per hour.	Adjusted. Allowed 5-day week and \$1.12½ per hour.	May 1	May 7	400	100
Hess-Goldsmith Silk Co., Kingston, Pa.	Strike	Textile workers	Sympathy with Wilkes-Barre and Plymouth workers.	Pending.	May 2	---	190	150
Painters and paper hangers, Alliance, Ohio.	do.	Building trades	Asked 10 cents per hour increase.	Adjusted. Allowed 5 cents per hour increase and 5-day week.	May 1	May 5	50	---
Carpenters, Portsmouth, N. H.	do.	Carpenters	Asked \$9 per day and 5-day week.	Adjusted. Allowed 5-day week and 5 per cent increase.	do.	May 14	100	---
Lipp Shoe Co., New York City.	do.	Shoe workers	Asked union recognition; conditions.	Adjusted. Union agreement concluded.	Apr. 4	May 20	110	45
Arthur Bender Co., New York City.	do.	do.	do.	Pending.	May 1	---	177	---
Griffin & White, Brooklyn, N. Y.	do.	do.	do.	do.	do.	---	120	---
Morgan & Grossman, Brooklyn, N. Y.	do.	do.	Wage cut and working conditions.	do.	do.	---	80	---





## LABOR DISPUTES REPORTED DURING THE MONTH OF MAY, 1929—Continued

Company or industry, and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved—	
					Beginning	Ending	Directly	Indirectly
General Bronze Corporation, Long Island, N. Y.	Strike.....	Iron and bronze workers.	Asked 44-hour week and wage increases.	Pending.....	1929 May 15	1929	350	500
Building Trades Employers' Association vs. Building Trades Council, New York City.	Threatened lockout.	Building trades.....	Calling strikes in sympathy with electrical workers.	Partial adjustment. Certain points agreed on by parties.	May 14		75,000	
Klechner Bros., Reading, Pa.	Strike.....	do.....	Refusal to sign agreement.	Pending.....	May 1		8	
Stone Field Corporation, Chicago, Ill.	do.....	Tailors.....	Wage cut and long hours.	do.....	Apr. 23		100	50
Bassett Metal Goods Co., Shelton, Conn.	do.....	Metal polishers.....	Asked increase and reinstatement of an employee.	Unclassified. Places filled by others before arrival of commissioner.	Apr. 15	Apr. 30	23	
Restaurants, South Chicago, Ill.	do.....	Walters.....	Renewal of union contract.	Pending.....	May 7		130	
Capitol Theater, Des Moines, Iowa.	Controversy.....	Musicians.....	Renewal of contracts.	do.....	May 16			
Kresge Building, Minneapolis, Minn.	do.....	Building trades.....	Asked union conditions.	do.....	May 8		(1)	
Van de Kamp Bakery, Seattle, Wash.	Lockout.....	Bakers.....	do.....	do.....	May 10		22	50
Street-car men, Cleveland, Ohio.	Threatened strike.	Street-car men.....	Asked union contract with increased wages.	do.....	May 18		(1)	
S. H. Thompson Plating Co., Dayton, Ohio.	do.....	Platers.....	Wage cut; 2 men discharged.	Adjusted. Returned; wage adjustment concluded.	May 11	May 22	11	89
M. S. Berk, Los Angeles, Calif.	Lockout.....	Cloak makers.....	Violation of agreement.	Pending.....	May 18		7	7
Asbestos workers, Buffalo, N. Y.	Strike.....	Pipe coverers.....	Asked 5-day week and increase from \$1.25 to \$1.37½ per hour.	Adjusted. Increased \$1 per day; 5-day week not granted.	May 1	May 20	45	15
Barbers, Buffalo, N. Y.	Threatened strike.	Barbers.....	Violation of agreement.	Adjusted. Will abide by agreement.	May 21	May 22	500	100
Sign writers, Buffalo, N. Y.	do.....	Sign writers.....	Asked wage increase and 5-day week.	Adjusted. Returned; accepted arbitration.	May 1	May 20	80	45
Painters and decorators, Battle Creek, Mich.	do.....	Painters and decorators.	Wages and closed shop.	Pending.....	do.....		70	
Iron and bronze workers, Brooklyn, N. Y.	Strike.....	Iron and bronze workers.	Hours and wages.....	do.....	May 18		1,000	2,000
Iron and bronze workers, New York City and Brooklyn.	do.....	do.....	do.....	do.....	May 21		600	2,000
Painters, Perth Amboy, N. J.	do.....	Painters.....	Asked \$12 per day.	Adjusted. Allowed \$11 per day; \$1 increase.	May 2	May 11	40	115
Mattman Silk Co., Bloomsbury, N. J.	do.....	Broad silk workers.....	Proposed wage cut 1 cent per yard.	Adjusted. Proposal of cut withdrawn.	Apr. 10	May 1	120	12
Eastern Engraving Co., New York City.	do.....	Photo-engravers.....	Wages.....	Adjusted. Wages adjusted.	Mar. 4	do.....	20	10

Company	Industry	Workers	Issue	Details	Resolution	Date	Amount
Garfield Manufacturing Co., Wal- lington, N. J.	Hydraulic-press op- erators.	Sheet-metal workers.	do.	Opposition to new system. Asked 15 cents per hour in- crease.	Adjusted. Allowed as asked; \$1.25 per hour.	May 1	125
Sheet metal, Evansville, Ind.	Press and bindery workers.	do.	do.	Asked wage increase and protest against "speed- up" system.	Pending.	June 7	18
Schweinfert Press, New York City.	Sign writers.	do.	do.	Company refused union agreement.	do.	(1)	150
Kreiss Sign Co., Buffalo, N. Y.	do.	do.	do.	do.	do.	(1)	24
Winters Sign Co., Buffalo, N. Y.	Controversy	Art glass workers.	do.	Asked 5-day week and \$1.25 per hour.	Adjusted. Allowed 5-day week and \$1.10 per hour.	May 1	9
Murphy's Trucking Service, West Brighton, Staten Island, N. Y.	Strike.	Truck drivers.	do.	Asked \$48 per week; \$8 in- crease.	Adjusted. Part returned; no in- crease.	May 7	10
Chas. Warner Co., Delaware River.	Controversy.	River-craft em- ployees.	do.	Men compelled to remain on boat for rest hours; bonus discontinued.	Adjusted. Men will remain on boats; receive part of former bonus.	Apr. 15	28
Bricklayers, plasterers, and masons, Greenwich, Conn.	Strike.	Building.	do.	Asked 5-day week and \$14 per day.	Unclassified. Demands granted be- fore arrival of commissioner.	May 1	260
Hod carriers, Greenwich, Conn.	do.	do.	do.	Asked 5-day week and \$9 per day.	Unclassified. Allowed 5-day week beginning July 1, 1920, and \$9 per day from May 14, 1920.	do.	240
Laborers, Greenwich, Conn.	do.	Laborers.	do.	Asked \$7 per day.	Unclassified. Not allowed.	do.	500
German House, (building), St. Louis, Mo.	do.	Carpenters and lath- ers.	do.	Jurisdiction of metal corner beads.	Adjusted. No decision as to juris- diction.	May 28	150
Ladies' leather goods, New York City.	Threatened strike.	Leather workers.	do.	Asked increase of 10 per cent and 40-hour week.	Pending.	June 6	5,000
Do.	do.	do.	do.	do.	do.	do.	600
Brick masons, Lorain, Ohio.	Strike.	Brick masons.	do.	Asked increase to \$13 per day.	Adjusted. Compromised on \$12.50 per day.	May 1	50
Scranton Taxi Co., Scranton, Pa.	do.	Taxi drivers.	do.	Working conditions.	Unclassified. Ended before arrival of commissioner.	May 29	(1)
Franklin Mining Co., Benton, Ill.	do.	Miners.	do.	2 men discharged.	do.	May 13	250
Susquehanna Coal Co., Glen Lyon, Pa.	do.	do.	do.	Working conditions.	Adjusted. Returned; satisfactory adjustment.	May 22	1,350
Carpenters, painters, plumbers and electricians, Bradford, Pa.	do.	Building trades.	do.	Asked 5-day week and wage increase.	Adjusted. Plumbers received 50 cents per day increase and 44-hour week; carpenters agreed to arbi- trate; painters received 10 cents per hour increase and 5-day week.	June 9	175
Total.							106,087
							27,092

<sup>1</sup> Not reported.

## Strikes and Lockouts in Great Britain and Northern Ireland in 1928

THE Ministry of Labor Gazette (London), in its issue for May, 1929, contains a discussion of industrial disputes during 1928, based on information received by the department. The number of such disputes occurring during the year, 302, is smaller than for any other year during the whole period for which statistics are available, and the aggregate number of days lost, 1,388,000, is "the lowest ever recorded by the department, with the exception of that in the previous year, for which the corresponding figure was only 1,174,000." Eight disputes which began in 1927 were carried over into 1928, the number of persons involved in them being about 500. The following table shows, by industry, the number of disputes beginning in 1928, with the number of workers involved and the days lost in all disputes in progress during the year:

TABLE 1.—NUMBER OF INDUSTRIAL DISPUTES, WORKERS INVOLVED, AND DAYS LOST DURING 1928 IN GREAT BRITAIN AND NORTHERN IRELAND, BY INDUSTRY

Industry group	Disputes beginning in 1928	Workers involved in disputes in progress during year	Number of working-days lost during year
Coal mining	97	82,200	452,000
Other mining and quarrying	3	300	9,000
Bricks, pottery, glass, etc.	11	800	21,000
Engineering	10	600	4,000
Shipbuilding	23	4,100	16,000
Other metal	18	3,500	40,000
Textile	33	24,500	695,000
Clothing	9	1,100	25,000
Woodworking and furniture	26	1,100	13,000
Building, public works, contracting, etc.	38	3,000	83,000
Transport	16	2,000	11,000
Commerce, distribution, and finance	6	300	8,000
Other	12	900	11,000
Total	302	124,400	1,388,000

Of the 124,400 workers shown above, 44,100 were not parties to the disputes, but were thrown out of employment by the closing of the establishments in which they occurred.

The coal-mining and textile industries combined account for over two fifths of the disputes, for 86 per cent of the workers involved, and for 83 per cent of the days lost. There was no one outstanding dispute in the mining industry, but in the textile industry most of the loss was incurred in a single disagreement.

The largest single dispute occurring in 1928 was a lockout involving about 16,600 workpeople in the cotton-weaving industry at Nelson, which was in progress from May 30 to July 12, and caused a loss of 600,000 working-days. The lockout was imposed by federated firms following a strike of the employees of one firm to secure the reinstatement of a weaver, who had been dismissed in connection with his objection to the payment of a fine for alleged bad work. The dispute was settled by the weaver in question being found work with another firm (an offer which the local trade-union had previously refused) and by the reference to further negotiations of questions as to the right to strike for the reinstatement of an individual and as to the system of fining at the particular establishment at which the strike occurred and in the local area, respectively.



## Causes of Disputes

THE FOLLOWING TABLE shows the principal causes for the disputes occurring in 1928:

TABLE 2.—CAUSES OF INDUSTRIAL DISPUTES BEGINNING IN 1928

Principal cause	Disputes		Workers directly involved	
	Number	Per cent	Number	Per cent
Wage increases.....	26	8.6	6,200	7.8
Wage decreases.....	53	20.9	14,900	18.6
Other wage questions.....	80	26.5	17,000	21.4
All wage questions.....	169	56.0	38,100	47.8
Hours of labor.....	15	5.0	800	1.0
Employment of particular classes or persons.....	69	22.8	12,600	15.8
Other working arrangements, rules, and discipline.....	30	9.9	6,600	8.4
Trade-unionism.....	13	4.3	1,300	1.6
Sympathetic action.....	6	2.0	20,300	25.4
Total.....	302	100.0	79,700	100.0

The distribution of disputes among these causes is not very unlike that of the previous year, except for the importance assumed by "sympathetic action," which, although it accounted for only 2 per cent of the disputes, was responsible for nearly half of the total loss of working days, and concerned one-fourth (25.4 per cent) of the total number of workers involved. Its importance is due to the sympathetic lockout at Nelson, referred to above. Questions concerning wages accounted for over half of the disputes, which was almost the same proportion as in 1927, while questions of trade-unionism accounted for only 4.3 per cent of the disputes as against 8.5 per cent in 1927.

## Results of Disputes

ACCORDING TO THEIR results, the disputes are classified as ending in favor of the workers, in favor of the employers, compromised, and still unsettled. "In favor of the workers or the employer" means that the group mentioned was completely successful in attaining or resisting the objects to which the stoppage of work was due. Disputes in which either side was partly but not wholly successful are included under "compromised."

TABLE 3.—RESULTS OF INDUSTRIAL DISPUTES BEGINNING IN 1928

Result	Disputes		Workers directly involved	
	Number	Per cent	Number	Per cent
In favor of workers.....	42	13.9	4,000	5.1
In favor of employers.....	144	47.7	31,400	39.3
Compromised.....	115	38.1	44,200	55.5
Unsettled.....	1	.3	100	.1
Total.....	302	100.0	79,700	100.0

In most years, disputes resulting in compromise form the most numerous group, but in 1928, 144, or nearly 48 per cent of all disputes, were settled in favor of the employers, as compared with 115 disputes, or about 38 per cent of

the total number, in which a compromise was effected. The largest dispute of the year, the lockout in the cotton industry at Nelson, was terminated by a compromise; apart from this dispute, the number of workpeople directly involved in disputes which resulted in a compromise settlement was approximately the same as the number directly involved in disputes ending in favor of employers. Only 42 disputes, mostly of small dimensions, resulted in favor of the workpeople.

### Methods of Settlement

OF THE 302 disputes which began in 1928 all but one had been finally settled at the time these figures were prepared. Practically two-thirds, 199, involving 68.8 per cent of the workers concerned, were settled by direct negotiation between the parties or their representatives. Eighteen disputes, involving 6.8 per cent of the workers, were settled by conciliation or arbitration. In 55 disputes, forming about 18 per cent of all cases, work was resumed on the employers' terms without negotiation, and nearly 24 per cent of the workpeople were involved in such disputes, which included a number of short stoppages by coal putters at collieries in Northumberland and Durham. In 21 cases the trouble was settled by the employment of other workers, but these were all small disputes, involving less than 1 per cent of the total number of workers.

### Industrial Disputes and Lost Time in New South Wales

IN ITS issue for February, 1929, the Industrial Gazette of New South Wales gives a detailed review of the industrial disputes which occurred during the year 1928, covering causes, time lost, number of workers involved, and methods of settlement, and gives in addition a summary of such data for the period 1914 to 1928, inclusive. The term "industrial dispute" is used to denote any disagreement, whether strike or lockout, which resulted in a loss of time, even though the time lost were only a few hours. In computing the time lost, however, only those days are counted which would actually have been worked under normal circumstances. "Thus, in mining industries, 'pay Saturday' is not counted as a working day." The following table shows the industries in which disputes involving loss of time occurred during 1928, with the number of days lost and of workers involved:

TABLE 1.—INDUSTRIAL DISPUTES IN 1928

Industry group	Number of disputes	Number of workers involved	Number of workdays lost
Building.....	2	192	645
Domestic and personal service.....	2	134	1,283
Stationary engineers.....	3	512	608
Laborers.....	16	1,164	4,578
Manufacturing.....	14	2,904	52,174
Mining.....	231	93,438	341,820
Quarrying.....	1	85	255
Miscellaneous.....	1	25	12
Transport (sea).....	6	2,483	69,171
Total.....	276	100,937	470,546

This shows mining, transport by sea, and manufacturing as the industries principally affected by disputes in 1928. Of the total

working days lost, 72.6 per cent were in the mining industry, 14.7 per cent in transport by sea, and 11.1 per cent in manufacturing, leaving less than 2 per cent for all other industries. The following summary for the period 1914 to 1928 shows the relative positions of these industries as to time lost during 15 years:

TABLE 2.—TIME LOST THROUGH INDUSTRIAL DISPUTES, 1914 TO 1928

Industry group	Working days lost	
	Number	Per cent
Mining industries:		
Coal and shale.....	8, 190, 479	49. 4
Metal, etc.....	3, 383, 430	20. 4
Total, mining industries.....	11, 573, 909	69. 8
Nonmining industries:		
Manufacturing.....	2, 415, 995	14. 6
Transport, sea.....	1, 550, 068	9. 3
Transport, land.....	93, 138	. 6
Building.....	658, 993	3. 9
Laboring.....	156, 508	. 9
Other.....	137, 806	. 9
Total, nonmining industries.....	5, 012, 508	30. 2
Total, all industries.....	16, 586, 417	100. 0

This shows that the three industries which led in time lost through industrial disputes in 1928 had nearly the same dominance during the longer period, though transport by sea and manufacturing changed their relative positions, the first furnishing only 9.3, and the second 14.6 per cent of the total.

### Causes of Disputes

THE FOLLOWING TABLE shows the number of disputes, of workers involved, and of days lost, by the cause of the trouble:

TABLE 3.—NUMBER OF DISPUTES, WORKERS INVOLVED, AND DAYS LOST, BY CAUSE OF DISPUTE

Cause of dispute	Disputes		Workers involved		Workdays lost	
	Number	Per cent	Number	Per cent	Number	Per cent
Wages.....	48	17. 4	19, 648	19. 5	86, 183	18. 3
Hours.....	18	6. 5	8, 126	8. 1	25, 077	5. 3
Working conditions.....	63	22. 9	22, 806	22. 6	166, 034	35. 3
Employment, etc.....	67	24. 3	17, 604	17. 4	123, 542	26. 2
Trade-unionism.....	4	1. 4	522	. 5	878	. 2
Sympathy.....	4	1. 4	2, 645	2. 6	33, 324	7. 1
Miscellaneous.....	42	15. 2	22, 086	21. 9	23, 701	5. 0
Not stated.....	30	10. 9	7, 500	7. 4	11, 807	2. 5
Total.....	276	100. 0	100, 937	100. 0	470, 546	100. 0

It will be noticed that "working conditions" accounted for a greater loss of time than any other one cause, with questions of employment a good second, and the third cause in order of importance, wages, considerably behind. Questions of trade-unionism and of "sympathy" were relatively unimportant.



## Settlements

BY FAR THE commonest method of settlement was direct negotiation between the parties at variance, which was used in 222 of the disputes occurring in 1928, accounting for 59.4 per cent of the total loss of time. Arbitration was used in the case of 15 disputes, accounting for 34.8 per cent of the days lost. In one case the 18 workers concerned were replaced by others, and 38 of the disputes were settled by methods vaguely classified as "other." The results of the disagreements are not given in detail, but it is stated that 27, accounting for 7.2 per cent of the working-days lost, resulted in modification of the conditions objected to, 191, accounting for 75.8 per cent of the days lost, resulted in no modification, while results are not stated for 58, accounting for 17 per cent of time lost.

## Relative Loss of Time Through Disputes and Other Causes

FOR THE NONMINING industries, the data as to lost time relate only to losses due to disputes, but for mining the records are more complete, showing time lost from all causes. From these it appears that loss of time through industrial disputes is far less in volume than through trade slackness, i. e., insufficiency of orders. Of the total of 2,678,852 working-days lost in the mining industry in 1928, one-eighth (12.7 per cent) was due to disputes, against nearly three-fourths (71.6 per cent) lost through trade slackness. For the 12 years 1917 to 1928 inclusive, the time lost in coal and shale mining, by cause, was as follows:

TABLE 4.—WORKING DAYS LOST IN COAL AND SHALE MINES, 1917 TO 1928, BY CAUSE

Cause	Days lost	
	Number	Per cent
Industrial disputes.....	6, 242, 909	34. 6
Other causes:		
Shortage of trucks.....	581, 659	3. 3
Slackness of trade.....	8, 081, 951	44. 8
Mine disabilities, etc.....	1, 069, 612	5. 9
Deaths and funerals of employees, etc.....	228, 020	1. 3
Meetings, extra holidays.....	200, 326	1. 1
Other.....	337, 155	1. 9
Not stated.....	1, 281, 917	7. 1
Total.....	18, 023, 549	100. 0

The time lost through industrial disputes, it will be noticed, is a trifle over one-third of the total, 34.6 per cent, as against something over one-half (54 per cent) due to shortage of trucks, slack trade, and mine disabilities, leaving a little less than one-eighth (11.4 per cent) to be accounted for by miscellaneous and unstated causes. The period covered includes some hotly fought industrial disputes, involving a large number of workers, so that the percentage of time lost from this cause is considerably larger than in the case of the single year 1928.

Another table gives for 1928 the average number of days per mine lost through disputes and other causes. The possible number of working-days for the year was 273, of which 123.4 were lost, 12.5 through industrial disputes and 110.9 through other causes. Thus the actual average working year in these mines was 149.9 days.

## WAGES AND HOURS OF LABOR

### Wage Increases Established by Recent Agreements and Awards

#### Railroad Signalmen

**R**AILROAD signalmen have received increases in hourly rates on the following railroads through negotiations of their committees with the managements or through mediation agreements:

On the Central Railroad of New Jersey a rate of 82 cents an hour has been established for signalmen and signal maintainers, and proportionately higher rates for the other classes, effective April 1, 1929.

The Chesapeake & Ohio Railroad has granted wage increases establishing a rate of 80 cents an hour for signalmen and signal maintainers.

The Delaware, Lackawanna & Western Railroad has granted increases which give an hourly rate of 82 cents to signalmen and signal maintainers.

Signalmen on the Hudson & Manhattan Railroad have secured an increase of 4½ cents an hour.

On the Lehigh Valley Railroad signalmen and signal maintainers secured an increase establishing a rate of 82 cents an hour.

The Minneapolis, St. Paul & Sault Ste. Marie Railway has granted an increase of 3 cents an hour to all of the permanent signal department employees, effective April 1, 1929. This establishes a rate of 81 cents an hour for signalmen and signal maintainers, \$214.13 per month for foremen, and \$199.07 for monthly rated maintainers. The starting rate for assistant maintainers is now 58 cents an hour, or \$141.13 a month for the first six months of the 4-year period, with a maximum rate of 72 cents an hour, or \$175.20 a month.

Signalmen on the New York Central Lines east and west of Buffalo have secured increases of approximately 5 cents an hour for all classes except that of helpers, for whom 4 cents an hour was secured. This increase gives signalmen and signal maintainers 83 cents an hour, assistants from 60 to 74 cents, and helpers 58 cents an hour.

Pittsburgh & Lake Erie Railroad, through negotiations with the general system committee of railroad signalmen, has established a rate of 83 cents an hour for signalmen and signal maintainers. Helpers were increased 4 cents an hour.

The St. Louis Terminal Association and the Railroad Signalmen of America have reached an agreement by which 83 employees of the signal department will receive an increase of 3 cents an hour.

The Union Pacific System, which includes the Union Pacific Railroad, Oregon Short Line, Los Angeles & Salt Lake Railroad, and the Oregon-Washington Railroad & Navigation Co., has granted an increase to its signal employees, effective March 16, 1929. Signalmen receive 77 cents an hour, signal maintainers 79 cents an hour. The rates of pay of signal wiremen and relay repairmen are to be continued at 80 cents and 85 cents an hour.

### Railway Express Employees—New York City

THE WAGES OF railway express employees, office clerks, platform service men, and foremen were increased 4 cents an hour, effective May 1, 1929.

### Railroad Telegraphers—New York, Chicago & St. Louis Railroad

A BOARD OF arbitration acting in the dispute between the New York, Chicago & St. Louis Railroad Co. and its employees in telegraph, station, and tower service made the following award on May 15, 1929:

That the rate of pay for the employees shall be increased the equivalent of 3½ cents per hour per position; that this amount so specified shall not be applied flat, but is to be distributed by agreement between the management and committees as specified in said arbitration agreement.

The provisions of this award shall become effective on the beginning of the pay-roll period the first day of which is nearest to the date of the award and shall continue in force for a period of one year from the effective date thereof and thereafter subject to 30 days' notice by or to the party of the first part.

The telegraphers had requested an increase of 15 cents per hour per position.

The board consisted of F. J. DeGrief, selected by the company; B. C. Lewis, selected by the telegraphers; and Arthur M. Millard, appointed by the United States Board of Mediation.

### Yardmasters—Chesapeake & Ohio Railroad

ON APRIL 30, 1929, the following mediation agreement was signed by the Chesapeake & Ohio Railroad and the Railroad Yardmasters of America:

1. Effective May 1, 1929, an increase of \$8 per month shall be added to the rates of yardmasters and assistant yardmasters.

2. The question relating to vacations with pay is hereby withdrawn without prejudice.

This agreement made this 30th day of April, 1929, shall continue in force and effect for one year from its effective date and thereafter, subject to the usual 30 days' written notice by either party to the other of its desire for a change.

In October, 1928, the yardmasters had made a request for an increased rate of pay and the restoration of the two weeks' annual vacation with pay.

The increase granted brings the rate of pay for yardmasters and assistant yardmasters of the Chesapeake & Ohio Railroad to \$245, \$255, and \$265 per month, or an average rate for the road of \$255.41.

### Wages and Labor Conditions in Alaska, 1927-28

IN THE fiscal year ending June 30, 1928, labor conditions in Alaska remained highly satisfactory, according to the report of the Governor of the Territory for that period. Well-stabilized wage schedules adjusted to the cost of living were a factor in the favorable situation. No reports of labor disturbances were received by the governor. While there was a dearth of skilled laborers and competent miners, especially at large lode mines, the common labor supply for the various industries was "quite satisfactory."



The principal Alaskan industries are fishing and mining.

Computed on the basis of 300 working-days per man per year, the fishing and mining industries together absorb 96 per cent of the labor employed in the industries of Alaska, aside from that engaged by the three railroads that are operating in the Territory. The fishing industry employs 70 per cent and the mining industry 26 per cent of the total. The Federal road-building organizations and the lumber and logging industry of southeastern Alaska represent the only other large employers of labor in the Territory.

According to the Bureau of Fisheries of the United States Department of Commerce, there were 28,872 men employed by the fishery industry in the calendar year 1927—an increase of 820 over the number so employed in the previous 12 months. In the same year 4,142 men were employed in the mining industry.

The fishing industry is carried on almost entirely in the coastal districts of the first and third judicial divisions. The work season lasts from four to eight months, being dependent upon the nature and situation of the fishery.

In the first judicial division, which includes all of the southeastern part of the Territory, from 35 to 50 per cent of the labor supply is secured from the residents of the Territory, approximately 10 per cent of those so secured being native Indians. Further labor needs are met by importation from the States for the fishing season only. About 45 per cent of these imported workers are employed under the so-called "oriental contract system."

Owing to the remoteness of many of the large canneries and the sparsity of the resident population in the third division, where the largest percentage of the fishery labor is employed, from 15 to 20 per cent of the total labor is secured locally, the balance being imported from the States. Of the labor secured locally in the third division, from 50 to 80 per cent are native Indians. From 35 to 45 per cent of the labor imported into the third division during the fishery season is contract labor.

### Wages

#### Fishing Industry

IN THE FISCAL year 1928 the daily wages for general cannery labor resident in the Territory were as follows: In the first judicial division males received from \$3.50 to \$5 and females from \$2 to \$3.50; in the third judicial division males received from \$2 to \$5 and females from \$1.50 to \$2.50. All other labor in the fishing industry is remunerated according to the scale shown in the following table. In most cases board was furnished in addition to wages.

TABLE 1.—MONTHLY WAGES IN THE ALASKAN FISHING INDUSTRY

Occupation	First division	Third division	Occupation	First division	Third division
Foreman	\$225	\$230	Blacksmiths	\$130	\$100
Outside foreman	200	180	Firemen	100	100
Boat captains	145	150	Trapmen	90	80
Boat crews, deck hands, etc.	100	80	Cooks	115	120
Boat engineers	130	130	Flunkies	80	70
Machinists	185	185	Iron-chink men	115	110
Machinists' helper	105	105	Retort men	115	110
Carpenters	125	135	Storekeepers	110	110
Carpenters' helper	90	90	Miscellaneous laborers	85	80
Pile-driver crews	90	90			

## Mining Industry

Labor conditions in the mining industry in Alaska differ greatly according to the location of the mines and the character of the work. General labor in placer mining received board and from 50 to 80 cents per hour, 8 to 10 hours constituting a shift. The cost of board per day was from \$1.50 in the Cook Inlet region to \$4 in the remote parts of the Territory such as Koyukuk and Shushana. Skilled workers' wages "range from \$5 per day and board for oilers in the Yentna district to \$13 per day and board for dredge masters in the Iditarod-Innoko district."

Coal miners' wages were quite uniform.

Underground coal miners and timbermen receive \$8.60 per day; underground laborers, trammers, and rope riders, \$7.80 per day; and outside labor, \$5.50 per day. Fire bosses are paid \$250 per month and foremen from \$250 to \$300 per month. Deductions from the above wages are made for board at rates of from \$1.50 to \$2 per day.

With the exception of small drift-mining operations, prospecting, and development work, Alaskan placer mining is restricted to the open season—ordinarily "from May or June to the freeze up in September or October."

Lode mining is carried on mainly in the coastal regions of the first and third judicial districts and absorbs about 1,500 men throughout the year.

The following table shows the wage scales for the more important lode mines of the coastal regions in 1928:

TABLE 2.—WAGES IN CERTAIN ALASKAN LODGE MINES, 1928

Occupation	Per 8-hour shift	Occupation	Per 8-hour shift
Machine drill men.....	\$4. 60-\$5. 50	Blacksmiths.....	\$5. 75-\$7. 00
Machine helpers.....	4. 00- 5. 00	Carpenters' helpers.....	4. 00- 5. 00
Muckers.....	4. 10- 5. 00	Blacksmiths' helpers.....	4. 00- 5. 50
Timbermen.....	5. 00- 6. 00	Hoisting engineers.....	4. 00- 5. 75
Trackmen.....	4. 50- 5. 25	Cagers.....	4. 35- 5. 25
Pipemen.....	5. 00- 5. 50	Laborers.....	3. 50- 5. 00
Carpenters.....	5. 50- 7. 00		

From the above wages deductions of \$1 to \$1.50 per day are made for board and of \$1.50 to \$2.40 per month for hospital and medical care.

Letting contracts for a considerable part of the underground work is a prevalent practice both at the larger lode mines and at the coal mines.

## Wages in Colorado, 1927 and 1928

THE wages paid to men and women in Colorado in specified occupations during 1928 are shown in the following table based on wage schedules returned to the Bureau of Labor Statistics of that State by the factory inspectors. These figures and the other statistics in this article are taken from the twenty-first biennial report of that bureau, 1927-1928.

In the industries specified, female workers have an 8-hour day. Most of the male workers are employed 8 hours per day, but in some

cases the work period is 9 hours. The median would be slightly over 8 hours per day for all male employees in the occupations listed.

TABLE 1.—WAGES IN COLORADO, BY INDUSTRY AND OCCUPATION, 1928

Industry and occupation	Wage rate	Industry and occupation	Wage rate
Artificial ice:	<i>Per hr.</i>	Bottling works: <sup>1</sup>	
Engineers.....	\$0.50	Males—	<i>Per wk.</i>
Firemen.....	.45	Foremen.....	\$25.00
Firemen's helpers.....	.35	Salesmen.....	32.00
Ice pullers.....	.40	Bottlers.....	21.50
Cold storage workers.....	.40	Laborers.....	18.00
Common laborers.....	.50	Females—	
	<i>Per day</i>	Bookkeepers.....	20.00
Mechanics.....	4.00	Stenographers.....	22.50
Truck drivers.....	3.00	Brick manufacturing: <sup>1</sup>	
	<i>Per mo.</i>	Foremen.....	27.50
Ice platform workers.....	120.00	Engineers.....	25.00
Coal wagon drivers.....	150.00	Kiln foremen.....	25.00
Salesmen and collectors.....	125.00	Dry-pan men.....	22.50
Auto agency, accessory, and repairs:		Pressmen.....	22.50
Males—	<i>Per wk.</i>	Truckers.....	22.50
Bookkeeper.....	40.00	Setters.....	27.00
Foremen, shops.....	45.00	General yardmen.....	21.00
Mechanics.....	32.00		
Mechanics' helpers.....	28.50	Cement manufacturing:	<i>Per hr.</i>
Officer help.....	22.50	Sack sorters.....	0.30
Sales.....	45.00	Quarry foremen.....	.60
Stock.....	35.00	Shovel runners.....	.42
Washer.....	23.00	Shovel cranemen.....	.50
Females—		Locomotive engineers.....	.43
Bookkeeper.....	23.00	Locomotive firemen.....	.43
Stenographer.....	16.50	Crusher men.....	.38
Telephone.....	16.00	Crusher men's helpers.....	.43
Automobile tire factories:		Millers.....	.50
Males—		Kiln operators.....	.50
Rubber workers.....	24.00	Electricians.....	.45
Tire builders.....	25.00	Assistants.....	.40
Cutters and assemblers.....	24.50	Machinists.....	.60
Accessory workers.....	26.00	Machinists' helpers.....	.43
Inspectors.....	26.00	Blacksmiths.....	.48
Janitors and maintenance.....	20.00	Repairmen.....	.48
Machine shops.....	30.00	General laborers.....	.38
Stores and stock room.....	23.00		
Paint and carpenter shop.....	28.50	General foremen.....	<i>Per mo.</i>
Shipping room.....	25.00	Chemists.....	200.00
Electricians.....	25.00	Chemists' assistants.....	175.00
Department foremen.....	40.00	Foremen, shipping department.....	110.00
Females—		Foremen, sack department.....	150.00
Stenographers.....	18.50	Draftsmen.....	125.00
Clerks.....	20.00	Office clerks.....	137.50
Cutters and assemblers.....	17.50	Clay products:	<i>Per hr.</i>
Accessories.....	16.00	Machine men.....	0.50
Auto tire sales:		Assistant machine men.....	.45
Males—	<i>Per mo.</i>	Brick wheelers.....	.45
Officer manager.....	190.00	Molders.....	.50
Salesmen.....	150.00	Laborers.....	.40
	<i>Per wk.</i>	Cleaners and dyers:	
Shopmen.....	24.00	Males—	<i>Per wk.</i>
Tire changers.....	18.00	Cleaners.....	27.50
Females—		Dyers.....	30.00
Stenographers.....	25.00	Drivers.....	40.00
Bookkeepers.....	27.50	Spotters.....	25.00
Bakery and sales:		Pressers.....	32.50
Males—		Females—	
Bakers.....	35.00	Bushelwomen.....	17.50
Drivers.....	30.00	Office.....	20.00
Floormen.....	22.50	Pressers.....	27.50
Porters.....	25.00	Spotters.....	30.00
Shippers.....	25.00	Creameries:	
Females—		Males—	
Bookkeepers.....	25.00	Butter makers.....	25.00
Cashiers.....	25.00	Drivers.....	25.00
Clerks.....	20.00	Salesmen.....	30.00
Stenographers.....	17.50	Laborers.....	20.00
		Cheese makers.....	25.00
		Office.....	30.00

<sup>1</sup> Women work 48 hours, men 60 hours per week.

<sup>1</sup> Men work 54 hours and 72 hours a week.



TABLE 1.—WAGES IN COLORADO, BY INDUSTRY AND OCCUPATION, 1928—Continued

Industry and occupation	Wage rate	Industry and occupation	Wage rate
<b>Creameries—Continued.</b>		<b>Hotels:</b>	
Females—	<i>Per wk.</i>	Males—	<i>Per mo.</i>
Helpers.....	\$12.00	Cooks.....	\$150.00
Office.....	20.00	Yardmen.....	60.00
Stenographers.....	20.00	Dishwasher.....	50.00
<b>Department stores:</b>		Bus boy.....	40.00
Males—		Clerk.....	120.00
Buyers.....	130.00	Bookkeeper.....	100.00
Salesmen.....	22.50	Porter.....	60.00
Floor manager.....	25.00	Bell boy.....	25.00
Porter.....	18.50	Elevator pilot.....	40.00
Wagon boys.....	15.00	Engineer.....	120.00
Females—		<b>Females—</b>	
Salespeople.....	17.50	Waiters.....	50.00
Elevator pilots.....	20.00	Telephone operator.....	50.00
Wrappers.....	12.00		
Cash girls.....	10.00	<b>Ice cream, wholesale:</b>	<i>Per wk.</i>
<b>Drug stores:</b>		Office clerks.....	37.50
Males—		Watchmen.....	30.00
Pharmacists.....	30.00	Superintendent.....	45.00
Delivery boys.....	12.50	Engineers.....	40.00
Soda fountains.....	24.00	Butter makers.....	30.00
Porters.....	17.50	Ice-cream makers.....	25.00
Clerks.....	22.50	Can washers.....	20.00
<b>Females—</b>		Shipping clerk.....	32.50
Cashiers.....	17.50	Drivers.....	25.00
Clerks.....	22.50	Stenographer.....	25.00
Office.....	22.50		
Soda fountain.....	14.00	<b>Iron works:</b>	<i>Per mo.</i>
<b>Foundry and machine shop:</b>	<i>Per day</i>	Draftsmen.....	150.00
Chief clerk.....	6.00	Cost clerks.....	85.00
Bookkeeper.....	4.75	Bookkeepers.....	150.00
Shipping clerk.....	4.25	Foundry foremen.....	225.00
Storekeeper.....	5.00		
Foundry clerk.....	4.75	<b>Machine-shop foremen</b>	<i>Per hr.</i>
Foremen.....	6.00	Car-shop foremen.....	1.70
Truck drivers.....	3.75	Machinists.....	.62½
Teamsters.....	4.00	Machinists' helpers.....	.60
Watchman.....	3.75	Operator.....	.65
Electrician.....	4.00	Car builders.....	.55
Blacksmith.....	6.00	Carpenters.....	.55
Machinists.....	5.60	Shipping clerk.....	.55
Machinists' helpers.....	4.25	Molders.....	.75
Boilermakers.....	6.00	Coremakers.....	.62½
Boilermakers' helpers.....	3.60	Cupola men.....	.50
Patternmakers.....	6.40	<b>Lumber and mill:</b>	
Patternmakers' helpers.....	4.40	Males—	
Carpenters.....	5.00	Mill employees.....	.65
Molders.....	5.40	Helpers.....	.50
Coremakers.....	5.00	Box factory.....	.60
Cupola men.....	5.50	Yardmen.....	.50
Foundry night men.....	3.75	Glaziers.....	.75
<b>Flour manufacturing:</b>	<i>Per mo.</i>		
Manager.....	325.00	<b>Shipping clerks</b>	<i>Per mo.</i>
Assistant manager.....	185.00	Salesmen.....	150.00
Bookkeeper.....	175.00	Warehousemen.....	100.00
Second bookkeeper.....	100.00	Office clerks.....	125.00
Office clerks.....	75.00	Truck drivers.....	100.00
Elevator foremen.....	130.00	Superintendents and foremen.....	165.00
Elevator men.....	125.00	Yard foremen.....	175.00
Engineers.....	125.00	<b>Females—</b>	
Firemen.....	125.00	Stenographers.....	100.00
Laborers.....	84.00	File clerk.....	120.00
Miller.....	175.00	Telephone operator.....	100.00
Packers.....	102.00	<b>Moving pictures:</b>	
Truck drivers.....	85.00	Males—	<i>Per wk.</i>
Warehouse.....	120.00	Musicians.....	55.00
<b>Garment manufacturing:</b>		Stage hands.....	35.00
Males—	<i>Per wk.</i>	Operators.....	35.00
Cutting.....	45.00	Janitors.....	20.00
Shipping.....	20.00	Door men.....	30.00
Salesmen.....	30.00		
<b>Females—</b>		<b>Ushers</b>	<i>Per hr.</i>
Foreladies.....	25.00	.....	.50
Ironers.....	22.50	<b>Females—</b>	<i>Per wk.</i>
Machine girls.....	24.00	Cashiers.....	16.50
Markers.....	22.00	Relief cashiers.....	6.00

TABLE 1.—WAGES IN COLORADO, BY INDUSTRY AND OCCUPATION, 1928—Continued

Industry and occupation	Wage rate	Industry and occupation	Wage rate
Pottery products:		Railroad shops and roundhouse—Contd.	<i>Per mo.</i>
Males—	<i>Per day</i>	Painter foremen	\$223.68
Mining and driving	\$4.50	Machine foreman	263.68
Packing	4.50	Boiler foreman	263.68
Porcelain manufacture	3.20	Repair track foremen	248.68
Kiln firing	4.75	Foreman outside points	265.00
Molds	4.75	Tank foremen	263.68
	<i>Per mo.</i>	Blacksmith foreman	263.68
Molders	200.00	Labor foremen	110.20
Females—		Coal-chute men	105.92
Office help	95.00		<i>Per hr.</i>
Clerks	75.00	Apprentice instructor	.85
	<i>Per day</i>	Machinists	.72
Porcelain manufacture	3.00	Machinists' helpers	.50
Packing	1.75	Helper apprentices	.54
Ore reducing and refining:	<i>Per mo.</i>	Apprentices	.35
General superintendent	475.00	Autogenous welders	.77
Assistant superintendent	260.00	Flue welder	.77
Assistant superintendent	225.00	Boiler makers	.76
Chief clerk	236.00	Boiler makers' helpers	.51
Chemist	200.00	Blacksmiths	.76
Laboratory assistant	90.00	Blacksmiths' helpers	.51
Civil engineer	250.00	Pipe fitters	.75
Assistant engineer	190.00	Sheet-metal workers	.72
Clubhouse manager	115.00	Sheet-metal workers' helpers	.49
Storekeeper	145.00	Electrician	.77
Clerks	125.00	Mill-machine operator	.74
Field superintendent	225.00	Locomotive carpenters	.69
Foremen	160.00	Carpenter helpers	.50
Treater	180.00	Upholsterers	.72
Stableman	130.00	Passenger-car men	.70
First engineer	135.00	Freight-car men	.64
Truck drivers	115.00	Laborers	.39
	<i>Per day</i>	Helpers	.49
Boiler makers	5.75	Painters	.71
Still men	5.75	Coach cleaners	.35
Pumpers	5.75		<i>Per day</i>
Boiler-house engineer	5.35	Hostlers, outside	6.27
Rig boiler foremen	6.00	Hostlers, inside	5.63
Boiler repair man	5.00	Hostlers' helpers	5.07
Car repair man	5.75	Stationary engineers	4.63
Lead burner	5.75	Stationary firemen	4.44
Refinery pumpers	5.00	Restaurant:	
Pipe fitters	5.40	Males—	<i>Per wk.</i>
Still helpers	4.95	Cooks	35.00
Boiler-house foremen	4.65	Second cooks	27.00
Still firemen	4.65	Dishwashers	17.50
Still cleaners	4.50	Bus boys	13.50
Car loaders	4.25	Storeroom	24.00
Boiler makers' helpers	4.25	Waiters	17.50
Car repair helpers	4.00	Females—	
Coal unloaders	4.00	Cooks	20.00
Refinery pump house engineers	3.85	Second cooks	15.00
Refinery gager	3.75	Dishwashers	12.00
Wells repair helpers	4.00	Waitresses	14.00
Field pumpers	3.25	Counters	17.50
Teamsters	3.75	Pantry	17.50
Pipe fitters' helpers	3.75	Cashiers	15.00
Watchmen	3.25	Tent and awning:	
Laborers	2.00	Males—	
Railroad shops and roundhouse:		Erectors	32.50
Timekeeper	5.00	Ropers	17.50
Fuel clerk	4.65	Helpers	10.00
Clerks	4.56	Females—	
Dispatcher	4.56	Seamstress	17.50
	<i>Per mo.</i>	Vinegar and pickle works:	
Master mechanic	370.00	Males—	<i>Per mo.</i>
Division clerk	190.00	Bookkeepers	150.00
Accountant	180.00	Clerks	150.00
General foreman	305.00	Foremen	200.00
Car foreman	263.68	Factory workers	135.00
Roundhouse foreman	263.68	Females—	
		Stenographers	100.00
		Clerks	75.00
		Factory workers	108.00

## Actual Annual Earnings in Certain Occupations

VERY GREAT VARIATIONS in annual earnings in the same occupation in different localities in Colorado are indicated in the accompanying table:

TABLE 2.—ACTUAL ANNUAL EARNINGS IN SPECIFIED OCCUPATIONS AND COLORADO CITIES

Occupation	Colorado Springs	Denver	Fort Collins	Fort Morgan	Greeley	Pueblo
Carpenter.....	\$2, 400	\$2, 160	\$1, 575	\$1, 100	\$1, 440	\$2, 100
Bricklayer.....	2, 400	2, 430	1, 800	1, 200	1, 800	2, 400
Painter.....	1, 950	2, 160	-----	1, 750	1, 440	2, 100
Hod carrier.....	1, 650	1, 600	1, 200	-----	1, 200	1, 500
Machinist.....	2, 400	2, 400	1, 550	1, 800	1, 500	1, 750
Blacksmith.....	1, 950	1, 800	1, 550	2, 400	1, 800	1, 800
Baker.....	1, 800	1, 500	1, 560	2, 400	1, 900	1, 400
Lineman.....	1, 090	1, 650	1, 620	1, 395	1, 800	1, 750
Bank teller.....	1, 800	1, 980	1, 900	1, 380	1, 560	1, 400

## Salaries of Teachers

THE TABLE BELOW gives the salaries of teachers in cities of different sizes in Colorado, such salaries being highest in the cities with populations of from 30,000 to 100,000.

TABLE 3.—SALARIES OF TEACHERS IN COLORADO

Cities with population of—	Elementary schools		Junior high schools		Senior high schools	
	Teacher	Principal	Teacher	Principal	Teacher	Principal
2,500 to 5,000.....	\$1, 226	\$1, 544	\$1, 377	\$2, 250	\$1, 625	\$2, 700
5,000 to 10,000.....	1, 400	1, 767	1, 494	2, 350	1, 744	3, 200
10,000 to 30,000.....	1, 473	1, 938	1, 644	2, 575	1, 811	3, 500
30,000 to 100,000.....	1, 578	2, 350	1, 942	3, 075	2, 075	4, 100

## Wages in Metalliferous Mines

THE WAGES OF workers in metalliferous mines in Colorado are given in the following table:

TABLE 4.—WAGES IN METALLIFEROUS MINES IN COLORADO

Occupation	Locality				
	Victor	Telluride	Breckenridge	Leadville	Clear Creek
Crusher man.....	-----	\$4. 00	\$4. 25	-----	-----
Battery man.....	-----	4. 00	-----	-----	-----
Fireman.....	-----	4. 00	-----	-----	\$4. 00
Mill labor.....	-----	3. 50	4. 00	-----	3. 50
Pipe fitter.....	-----	4. 50	-----	-----	-----
Table man.....	-----	3. 50	4. 50	-----	-----
Blacksmith.....	\$4. 75	5. 00	5. 00	\$5. 00	4. 75
Blacksmith's helper.....	4. 00	4. 50	4. 25	4. 00	4. 00
Carpenter.....	5. 00	6. 00	5. 50	5. 00	5. 00
Compressor man.....	4. 25	4. 50	-----	4. 50	4. 00
Electrician.....	5. 50	5. 00	-----	5. 00	5. 00
Machinist.....	4. 25	6. 00	4. 75	5. 00	-----
Machinist's helper.....	3. 75	4. 25	4. 25	4. 50	-----
Motorman.....	4. 00	4. 30	-----	4. 50	-----
Ore sorter.....	-----	4. 00	-----	4. 50	4. 00
Pump man.....	4. 00	4. 00	-----	4. 50	4. 00
Surface labor.....	3. 50	3. 50	4. 25	4. 00	4. 00
Timberman.....	4. 50	4. 50	4. 75	4. 50	4. 50
Timberman's helper.....	4. 00	4. 00	4. 25	4. 00	4. 00
Tool sharpener.....	4. 25	3. 50	5. 25	5. 00	4. 50
Trammer.....	4. 25	4. 00	4. 25	4. 00	4. 25
Topman.....	4. 00	-----	4. 25	4. 00	4. 00
Trackman.....	4. 25	4. 75	-----	4. 00	-----
Hoist engineer.....	4. 25	4. 75	5. 00	5. 00	4. 75
Mucker.....	4. 75	4. 00	4. 75	4. 00	4. 00
Machineman.....	4. 75	4. 50	4. 75	4. 50	5. 00
Truck driver.....	4. 25	-----	-----	-----	-----
Watchman.....	4. 00	3. 50	4. 25	4. 00	-----



## Collection of Wage Claims

DURING 1927 and 1928 the collection and settlement of wage claims continued to be an important part of the work of the bureau of labor statistics of Colorado. "Strictly speaking," the report states, "there is no legal warrant on which to base work of this kind, as there is no existing statute which authorizes the deputy labor commissioner to collect or settle private debts. Nevertheless, the very nature of these claims and the almost helpless condition of the claimants prompts us to activity, and everything that is possible for us to do is promptly done, in order that quick settlement is secured, and in order that the worker shall get the money he or she has honestly earned."

During the past biennium despite the lack of legal authorization more than 60 per cent of the claims submitted to the bureau of labor statistics have been collected. No charge is made to claimants for such service which is performed without "red tape" or any sort of "stalling."

A summary of the bureau's wage-collection work for the two years ending November 30, 1927 and 1928, is given below:

	1927	1928
Number of claims.....	968	876
Number of claims paid.....	609	536
Amount collected.....	\$14, 119	\$13, 569
Average amount per claim.....	\$18. 47	\$24. 45

It is estimated that if the claimants served by the bureau of labor statistics in 1927 and 1928 had had recourse to court proceedings to secure the amounts due them it would have cost them not less than \$10,000 or \$15,000.

Approximately 20 per cent of the claimants are women, mainly servants.

The bureau reiterates its recommendation of two years ago which reads as follows:

The experience of the department is very convincing that something with legal force behind it should be adopted by the legislature to the end that unscrupulous employers may be brought to book and forced to pay laborers for work performed. In certain cases it is necessary that there should be a court that will handle claims in a legal way without cost to the claimant, and a court that would handle them without intervention of attorney, the aim being to secure immediate payment of a claim.

A draft of a proposed law for a small claims court is published in the report, which provides that all justices of the peace in Colorado be given special procedure for small claims; that action be commenced by affidavit; that service of summons be by mail; that no attorney at law shall take part in first proceedings, that pleadings shall be informal; that if the judgment or order be "against the defendant, he shall pay the same forthwith or at such times and upon such terms as the justice shall prescribe"; and that no fees are to be charged.

### Hourly Earnings in Connecticut, December 1, 1928

**A**CTUAL hourly earnings of "able-bodied adults" in certain occupations in Connecticut, December 1, 1928, are reported as follows by the Industrial Investigator of the State Department of Labor and Factory Inspection:<sup>1</sup>

STARTING RATES AND ACTUAL HOURLY EARNINGS IN LEADING INDUSTRIAL PLANTS IN CONNECTICUT, DECEMBER 1, 1928

Occupation	Start- ing rate	Ac- tual hour- ly earn- ings	Occupation	Start- ing rate	Ac- tual hour- ly earn- ings
<i>Males</i>			<i>Males—Continued</i>		
Assemblers, bench, first grade	\$0.45	\$0.57	Lathe hands, "24" to "36"	\$0.65	\$0.70
Assemblers, bench, second grade	.40	.54	Lathe hands, above "36"	.70	.70
Assemblers, machine tool, first grade	.60	.71	Machinists, first grade—S. A.	.55	.70
Assemblers, machine tool, second grade	.55	.60	Milling, hand	.45	.55
Automatic screw machine operators	.55	.65	Machinists, second	.55	.625
Auto machine operators	.42	.65	Milling, universal, first grade	.55	.75
Blacksmiths, first grade	.715	.75	Milling, universal, second grade	.45	.55
Blacksmiths, second grade	.55	.60	Millwrights	.60	.70
Blacksmiths' helpers	.465	.50	Millwrights' helpers	.47	.525
Boring mill "36" and under	.65	.70	Molders, bench	.50	.55
Boring mill "36" and over	.70	.85	Molders, iron, "bench"	.70	.90
Buffers, first grade	.555	.69	Molders, iron, "machine"		.75
Buffers, second grade	.40	.50	Molders, iron "floor"	.80	.875
Carpenters	.55	.70	Molders, brass, "floor"	.80	.875
Carpenters' helpers	.45	.60	Pattern makers, wood	.75	.80
Chippers	.45	.50	Pattern makers, metal	.75	.80
Core makers	.70	.73	Planer hands "36" under, first grade	.60	.70
Designers, tool and machine	.82	1.00	Planer hands "36" under, second grade		.65
Die makers, first grade work	.755	.805	Planer hands above "36", first grade	.70	.75
Die makers, second grade work	.68	.705	Planer hands above "36", second grade		.65
Die sinkers, hand	.65	1.00	Polishers, first grade work	.56	.715
Die sinkers, hand and machine	.725	.83	Polishers, second grade work	.40	.60
Draftsmen	.65	.80	Power press, large, operators	.45	.55
Drill press, multiple spindle, first grade	.50	.60	Power press, small, operators	.405	.50
Drill press, ordinary work	.41	.525	Scrapers, machine tool, first grade	.55	.66
Drop forgers, first grade work	.72	.885	Scrapers, machine tool, second grade	.41	.55
Drop forgers, second grade work	.68	.86	Shapers, first grade work	.60	.65
Electricians	.59	.705	Shapers, second grade work	.56	.60
Electricians' helpers	.435	.535	Sheet-metal workers	.65	.75
Firemen	.46	.555	Sheet-metal workers' helpers		.48
Foot press operators	.40	.475	Shop helpers	.415	.50
Grinders, surface, first grade	.515	.62	Snaggers		.50
Grinders, surface, second grade		.58	Watchmen	.38	.45
Grinders, universal, first grade	.60	.70			
Grinders, universal, second grade	.55	.60	<i>Females</i>		
Hand screw machine operators	.45	.60	Bench work	.275	.38
Hardeners, first grade work	.60	.70	Drill press operators	.275	.40
Hardeners, second grade work	.45	.55	Foot press operators	.28	.41
Helpers, foundry	.45	.55	Inspecting	.285	.355
Inspecting, exacting work	.55	.65	Milling, "hand"	.275	.41
Inspecting, ordinary work	.45	.55	Packing-room workers	.275	.42
Lathe hands, under "24", first grade	.56	.65	Power press operators	.29	.41
Lathe hands, under "24", second grade		.60			

The total average factory wage for males was 64 cents per hour and the total average factory wage for females was 38 cents per hour. The average weekly running time was 50 hours.

<sup>1</sup> Connecticut. Department of Labor and Factory Inspection. Biennial reports. Hartford, 1929.

### Actual Working Hours in Various Foreign Countries

**A**N INQUIRY into actual working hours in various countries was conducted in October, 1928, by the International Federation of Trade Unions through its national centers, and the results have been published in its official organ, *The International Trade Union Movement* (Amsterdam), for February, 1929.

The report presents detailed information for 15 countries—Belgium, Czechoslovakia, Denmark, Estonia, Germany, Holland, Hungary, Latvia, Memel Territory, Palestine, Poland, South West Africa, Spain, Sweden, and Switzerland—with certain figures (totals only) for Austria. The study covered eight industries: Building trades, printing trades, chemical industry, woodworking industry, metal industry, boot and shoe industry, textile industry, and mining industry. The statistics include number of concerns investigated, number of workers employed, and the working hours during the first week of October, 1928, the data on hours being classified under the following heads: Short-time work, under 48 hours, 48 hours, over 48 but not over 51 hours, over 51 but not over 54 hours, over 54 but not over 60 hours, and over 60 hours. In all of the classifications except short-time work, any overtime there may have been was included.

The International Federation of Trade Unions points out that its national centers are not equipped for handling such matters and that for most of them the ground to be covered was new, and therefore, in using the figures the following "must be carefully borne in mind in any judgment which is passed on the working hours in the various countries."

The results of the first inquiry must therefore be regarded merely as a beginning. Various national centers have pointed out in their replies that the information they have sent concerning working hours does not give a true picture of the state of affairs. This alone is sufficient to show that the statistics published are inadequate as a basis of international comparison. An international comparison furnishing a basis for absolutely correct conclusions would only be possible if the inquiry in each of the countries covered precisely the same ground in each and were conducted by each with the same degree of accuracy and this of course we can not under present circumstances guarantee.

The Danish national center informed the federation that the information as to the number of concerns included for that country is not quite correct owing to a certain amount of duplication in the case of the building trades, many workers in the various crafts being employed by the same employers. The national center in Latvia stated that it was impossible to secure reliable and exact statistics concerning working hours, but that "as the center is well acquainted with conditions in very many of the concerns, it has, with the aid of this knowledge and the information received, given a fairly correct idea of the working hours of some of the industrial workers."

In Palestine, the inquiry was limited to Jerusalem, Haifa, and Tel-Aviv, and the data cover Jewish workers only. It is said that very few Arab workers are employed in the industries listed, except in the building trades, and that Arab working hours "are far longer than those of Jewish workers, who are nearly all organized." Also, the inquiry was limited to the really important concerns.

In South West Africa the inquiry was conducted in the seven largest localities.



As previously stated, only totals were received for Austria. The number of concerns covered was 19,580 and the total number of workers 348,550. The majority of the workers (84.1 per cent) were employed 48 hours; 4.8 per cent were on short time; 2.9 per cent worked under 48 hours; 4.5 per cent, over 48 but not more than 51 hours; 2.9 per cent, over 51 but not more than 54 hours; and 0.8 per cent, over 54 but not more than 60 hours. The report states that in the case of groups working over 48 hours this was either on account of overtime work or of employment in factories with continuous processes.

The figures for the printing industry in Belgium were received too late for inclusion in the general tables. The number of establishments covered in this industry was 214 and the total number of workers 2,680. Of these workers, 0.1 per cent were on short time; 3.8 per cent worked under 48 hours; 87 per cent, 48 hours; 2.2 per cent, over 48 but not more than 51 hours; 2.9 per cent over 51 but not more than 54 hours; 2.9 per cent, over 54 but not more than 60 hours; and 0.1 per cent, over 60 hours.

Data on the printing industry in Dublin and Cork, Ireland, during the week October 1 to 6, 1928, were furnished by the Irish Labor Party and Trade-Union Congress. The number of concerns included in the two towns was 54 and the number of workers 1,209. The proportion of the workers employed each specified period was as follows: Under 48 hours, 26.1 per cent; 48 hours, 67.9 per cent; from 48 to 51 hours, 4.5 per cent; from 51 to 54 hours, 1.3 per cent; from 54 to 60 hours, 0.2 per cent. Apparently no workers were employed on short-time work, or for more than 60 hours.

TABLE 1.—ACTUAL WORKING HOURS IN VARIOUS COUNTRIES, OCTOBER, 1928, BY COUNTRY

Country	Number of factories covered	Number of workers	Per cent of workers who were working—						
			On short time	In full-time factories, counting overtime work					
				Under 48 hours	48 hours	Over 48 but not over 51 hours	Over 51 but not over 54 hours	Over 54 but not over 60 hours	Over 60 hours
Belgium.....	2,733	211,481	0.5	1.8	94.9	0.3	2.2	0.3	—
Denmark.....	16,449	98,577	3.0	.6	92.7	1.7	1.1	.8	0.1
Germany.....	73,288	3,826,083	9.1	6.4	56.9	9.6	14.6	3.2	.2
Estonia.....	959	27,704	.5	43.8	44.4	2.8	1.5	6.8	.2
Latvia.....	( <sup>1</sup> )	20,002	—	63.0	10.4	4.9	5.0	13.2	3.5
Memel Territory.....	22	3,342	—	—	97.6	—	—	2.4	—
Holland.....	4,842	184,614	.4	15.8	69.7	10.0	2.5	.8	.8
Austria.....	( <sup>1</sup> )	348,550	4.8	2.9	84.1	4.5	2.9	.8	—
Palestine.....	126	4,180	.2	11.6	51.7	7.1	20.5	7.0	1.9
Poland.....	830	127,940	2.3	54.1	13.0	4.4	8.2	12.8	5.2
Sweden.....	6,937	256,313	7.0	4.0	78.4	3.3	3.7	3.1	.5
Switzerland.....	4,209	163,500	1.1	2.9	51.9	12.0	29.3	2.7	.1
Spain.....	3,698	34,834	16.3	6.0	48.0	9.6	—	20.1	—
South West Africa.....	62	991	—	—	53.5	2.3	13.0	24.0	7.2
Czechoslovakia.....	99	26,086	9.1	8.9	75.2	3.9	1.4	1.2	.3
Hungary.....	( <sup>1</sup> )	90,009	—	26.1	43.9	8.6	3.1	16.0	2.3
Total.....	114,254	5,424,206	7.4	7.9	60.6	8.4	12.0	3.4	.3

<sup>1</sup> No information given.

Table 1 shows the proportion of workers in each of the countries covered by the inquiry who were working each classified number of hours or on short time. Table 2 presents similar information by industry for the countries as a whole. The discrepancy between the totals of Tables 1 and 2 is due to the omission of the Austrian totals from Table 2.

It will be seen from Table 2 that the best position in regard to working hours was held by the building trades, the printing trades, and the woodworking industry, where the respective percentages of workers employed over 48 hours were only 11.8, 10, and 9.3, and very little short-time work was being done. The building trades had the highest percentage of workers employed under 48 hours (19.5 per cent), followed by the woodworking industry (11.1 per cent), the mining industry (10.3 per cent), and the printing trades (10 per cent). The highest percentages for workers employed over 48 hours occurred in the metal industry (32.2 per cent), followed by the textile industry (29.2 per cent), the chemical industry (25.8 per cent), and the mining industry (25.2 per cent). Short-time work is very extensive in the boot and shoe industry and in the textile industry, 47 per cent of the workers covered in the boot and shoe industry and 21.4 per cent of those in the textile industry being employed on short time. No very striking percentages are shown under the headings 54 but not over 60 hours and over 60 hours, the highest in both cases being in the chemical industry, with 6.3 and 1.3, respectively, in the two classifications.

TABLE 2.—ACTUAL WORKING HOURS IN 15 FOREIGN COUNTRIES, OCTOBER, 1928, BY INDUSTRY

Industry	Number of factories covered	Number of workers	Per cent of workers who were working—						
			On short time	In full-time factories, counting overtime work					
				Under 48 hours	48 hours	Over 48 but not over 51 hours	Over 51 but not over 54 hours	Over 54 but not over 60 hours	Over 60 hours
Building trades.....	44, 025	595, 545	0.3	19.5	68.4	5.0	3.8	2.3	0.7
Printing trades.....	7, 720	142, 310	1.0	10.0	79.0	4.9	2.9	1.8	.4
Chemical industry.....	2, 058	289, 737	3.3	5.6	65.3	4.6	13.6	6.3	1.3
Woodworking industry.....	22, 982	321, 135	4.5	11.1	75.1	4.2	2.9	1.7	.5
Metal industry.....	26, 542	1, 905, 572	7.8	4.5	55.5	11.7	15.4	4.8	.3
Boot and shoe industry.....	3, 852	118, 538	47.0	3.2	35.0	2.8	7.2	4.7	.1
Textile industry.....	6, 504	694, 784	21.4	6.0	43.4	17.3	9.8	2.0	.1
Mining industry.....	571	1, 008, 035	.5	10.3	64.0	2.7	19.3	3.1	.1
Total.....	114, 254	5, 075, 656	7.6	8.2	59.0	8.6	12.6	3.6	.4

Detailed figures, by country, are given for each industry in Table 3:

TABLE 3.—ACTUAL WORKING HOURS IN VARIOUS COUNTRIES, OCTOBER, 1928, BY COUNTRY AND BY INDUSTRY

*Building trades*

Country	Number of factories covered	Number of workers	Per cent of workers who were working—						
			On short time	In full-time factories, counting over-time work					
				Under 48 hours	48 hours	Over 48 but not over 51 hours	Over 51 but not over 54 hours	Over 54 but not over 60 hours	Over 60 hours
Belgium <sup>1</sup>	2,037	22,255	0.8	0.1	93.1	1.0	3.2	1.6	0.2
Denmark	7,123	28,410	.4	.2	98.6	.3	.3	.1	
Germany	25,056	414,086		25.7	65.4	3.8	3.9	1.0	.2
Estonia	63	1,096	4.0		77.9	5.8	4.8	7.5	
Latvia	( <sup>2</sup> )	1,000			20.0			80.0	
Memel Territory	8	326			88.0			12.0	
Holland	3,223	33,539		5.6	84.2	2.9	1.5	1.3	4.5
Palestine	5	2,143			53.7	6.1	35.0	4.9	.3
Poland	368	14,501	6.5	39.7	5.5	4.4	14.6	19.8	9.5
Sweden	3,989	49,063	.6	.7	96.2	1.1	.6	.5	.2
Switzerland	1,150	18,000		8.9	23.9	55.5		11.7	
Spain	966	3,910	9.4		90.0	.6			
South West Africa	29	147			78.9	10.2			10.9
Czechoslovakia <sup>3</sup>	8	586			66.4		28.5	5.1	
Hungary	( <sup>2</sup> )	6,483		3.9	7.8	23.3	29.9	32.8	2.3
Total	44,025	595,545	.3	19.5	68.4	5.0	3.8	2.3	.7

*Printing trades*

Belgium <sup>4</sup>									
Denmark	461	4,342		7.5	73.0	7.8	5.7	5.4	0.6
Germany	5,198	96,369	1.0	3.9	84.1	5.9	3.1	1.5	.5
Estonia	68	1,816	1.0	88.0	7.6	1.0	1.3	.5	.6
Latvia	( <sup>2</sup> )	2,202		100.0					
Memel Territory	4	157			100.0				
Holland	621	9,682	0.1	4.1	90.9	1.7	1.1	2.1	
Palestine	25	322	2.5	62.7	28.0	4.0	2.8		
Poland	158	3,599	0.5	83.0	7.8	2.3	1.9	2.7	1.8
Sweden	740	12,623	2.6	5.7	75.9	4.6	4.9	5.1	1.1
Switzerland	220	2,700		20.4	79.6				
Spain	215	1,812	2.7	11.0	86.3				
South West Africa	4	26			80.8	19.2			
Czechoslovakia <sup>3</sup>	6	903		82.0	13.3	.7	4.0		
Hungary	( <sup>2</sup> )	5,757		8.7	91.3				
Total	7,720	142,310	1.0	10.0	79.0	4.9	2.9	1.8	.4

*Chemical industry*

Belgium <sup>2</sup>									
Denmark	153	6,992			100.0				
Germany	1,566	230,567	3.0	2.5	67.1	4.8	15.2	6.5	0.9
Estonia	70	1,203	.3	23.6	64.9	9.1	2.0	.1	
Latvia	( <sup>2</sup> )	3,300		54.5	3.6	5.5	7.6	20.6	8.2
Memel Territory	2	1,238			100.0				
Holland	33	5,792		1.3	80.3	8.3	6.0	4.1	
Palestine	6	186			100.0				
Poland	63	13,756	3.6	60.0	15.8	3.5	4.1	6.3	6.7
Sweden	140	19,473	11.3	.8	66.7	2.4	14.6	3.6	.5
Switzerland	15	3,500			92.9		6.3	.8	
Spain <sup>2</sup>									
South West Africa	2	24			100.0				
Czechoslovakia <sup>3</sup>	8	923			90.6	2.5	2.2	3.2	1.5
Hungary	( <sup>2</sup> )	2,783			40.7	14.3	4.8	26.6	13.6
Total	2,058	289,737	3.3	5.6	65.3	4.6	13.6	6.3	1.3

<sup>1</sup> Figures are for building trades and woodworking industry combined.

<sup>2</sup> No information given.

<sup>3</sup> The figures are from German center at Reichenberg; figures from Prague received too late for inclusion.

<sup>4</sup> Figures for Belgium received too late for inclusion. See text for data.



TABLE 3.—ACTUAL WORKING HOURS IN VARIOUS COUNTRIES, OCTOBER, 1928, BY COUNTRY AND BY INDUSTRY—Continued

*Woodworking industry*

Country	Number of factories covered	Number of workers	Per cent of workers who were working—						
			On short time	In full-time factories, counting over-time work					
				Under 48 hours	48 hours	Over 48 but not over 51 hours	Over 51 but not over 54 hours	Over 54 but not over 60 hours	Over 60 hours
Belgium <sup>1</sup>									
Denmark	4,816	13,633	3.8		93.3	2.4	0.3		
Germany	15,253	222,160	5.0	11.3	75.6	4.5	2.9	0.7	
Estonia	277	6,830	.4	33.5	45.1	2.0	1.0	17.8	0.2
Latvia	( <sup>2</sup> )	4,000		75.0	1.2	3.8	5.0	10.0	5.0
Memel Territory	5	1,314			100.0				
Holland	512	5,807			100.0				
Palestine	22	250		40.8	12.8	10.0	26.8	9.6	
Poland	70	4,345	7.8	28.9	8.2	4.4	6.0	16.4	28.3
Sweden	876	49,669	3.3	3.6	79.4	5.7	4.3	3.3	.4
Switzerland	750	5,000	.4	36.0	62.0	.6	1.0		
Spain	391	2,126	29.6		70.4				
South West Africa <sup>3</sup>									
Czechoslovakia <sup>3</sup>	10	610			90.0	2.0	2.9	5.1	
Hungary	( <sup>2</sup> )	5,391		4.5	95.5				
Total	22,982	321,135	4.5	11.1	75.1	4.2	2.9	1.7	.5

*Metal industry*

Belgium	273	28,846		8.2	86.4	1.4	2.9	1.0	0.1
Denmark	3,087	33,489	0.9	.2	94.1	2.3	1.8	.6	
Germany	19,698	1,525,591	9.4	1.8	54.5	12.5	16.8	4.8	.2
Estonia	302	4,604	.6	62.0	35.1	1.1	.2	.6	.4
Latvia	( <sup>2</sup> )	3,000		60.0	25.0	8.0	4.0	2.0	1.0
Memel Territory	2	179			100.0				
Holland	263	46,437	.1	.4	56.5	34.2	7.7	1.1	
Palestine	44	645		11.0	55.8	2.3		20.8	10.1
Poland	106	61,373	1.6	64.5	10.1	4.7	4.9	10.9	3.3
Sweden	824	80,276	3.4	4.7	78.8	3.8	3.3	5.3	.8
Switzerland	1,900	86,000	.1	.4	57.9	8.7	30.4	2.3	.2
Spain	1	900	11.1	3.3	85.6				
South West Africa	21	431			71.9	.7	12.3	10.0	5.1
Czechoslovakia <sup>3</sup>	21	6,974	2.1		92.8	1.1	.5	2.6	.9
Hungary	( <sup>2</sup> )	26,827		21.6	54.3	6.9	1.2	12.6	3.4
Total	26,542	1,905,572	7.8	4.5	55.5	11.7	15.4	4.8	.3

*Boot and shoe industry*

Belgium	73	5,195	7.5	27.7	64.8				
Denmark	616	3,499	30.7	.2	69.1				
Germany	898	81,879	59.0	1.9	35.2	3.4	0.4	0.1	
Estonia	52	654	.2	37.6	58.9	.6	.4	1.9	0.4
Latvia	( <sup>2</sup> )	1,500		13.3	60.0	1.3	18.7	6.7	
Memel Territory <sup>3</sup>									
Holland	13	962	.2		84.5	12.0	3.3		
Palestine	8	120		8.3		41.7	25.0	16.7	8.3
Poland	6	148	33.8	10.1	2.7	17.6	27.0	5.4	3.4
Sweden	100	7,038	65.9		31.1	2.1	.7	.2	
Switzerland	24	8,300	4.2		3.6	.6	91.6		
Spain	2,061	7,965	10.9		26.3			62.8	
South West Africa <sup>3</sup>									
Czechoslovakia <sup>3</sup>	1	140			100.0				
Hungary	( <sup>2</sup> )	1,138		33.6	5.8	7.4	13.3	31.3	8.6
Total	3,852	118,538	47.0	3.2	35.0	2.8	7.2	4.7	.1

<sup>1</sup> No information given.<sup>2</sup> Figures are from German center at Reichenberg; figures from Prague received too late for inclusion.<sup>3</sup> See building trades.

TABLE 3.—ACTUAL WORKING HOURS IN VARIOUS COUNTRIES, OCTOBER, 1928, BY COUNTRY AND BY INDUSTRY—Continued

*Textile industry*

Country	Number of factories covered	Number of workers	Per cent of workers who were working—						
			On short time	In full-time factories, counting over-time work					
				Under 48 hours	48 hours	Over 48 but not over 51 hours	Over 51 but not over 54 hours	Over 54 but not over 60 hours	Over 60 hours
Belgium <sup>1</sup>									
Denmark	193	8,212	11.2	0.8	80.4	1.3	1.9	3.8	0.6
Germany	5,619	530,426	25.9	5.9	35.6	21.9	9.8	.9	
Estonia	102	9,180	.1	53.0	39.4	3.1	2.5	1.9	
Latvia	( <sup>2</sup> )	5,000		72.0	1.0	8.0	3.0	12.0	4.0
Memel Territory	1	128			68.0			32.0	
Holland	165	48,395	1.7	2.6	95.2	.3	.2		
Palestine	16	514		19.3	66.1	12.7		1.9	
Poland <sup>6</sup>									
Sweden	216	30,156	20.0		73.5	2.1	3.0	1.2	.1
Switzerland	150	40,000	3.3	1.2	55.0	5.0	35.0	.5	
Spain	1	40	100.0						
South West Africa <sup>2</sup>									
Czechoslovakia <sup>3</sup>	41	13,770	12.6		80.6	6.1	.3	87.4	
Hungary	( <sup>2</sup> )	8,963			4.2	.3	2.4	87.5	5.6
Total	6,504	694,784	21.4	6.0	43.4	17.3	9.8	2.0	.1

*Mining industry*

Belgium	350	155,185	0.3		97.8		1.9		
Denmark <sup>7</sup>									
Germany	( <sup>2</sup> )	725,005		6.0	62.5	2.4	25.9	3.2	
Estonia	25	2,321			79.2	5.4	.3	15.1	
Latvia <sup>7</sup>									
Memel Territory <sup>7</sup>									
Holland	12	34,000		74.4	23.8	1.8			
Palestine <sup>7</sup>									
Poland	59	30,218	.6	37.2	22.5	4.5	14.8	17.0	3.4
Sweden	52	8,015		44.8	50.6	1.8	.8	1.7	.3
Switzerland <sup>7</sup>									
Spain	63	18,081	20.0	10.3	40.3	18.3		11.1	
South West Africa	6	363			16.3		20.9	53.7	9.1
Czechoslovakia <sup>3</sup>	4	2,180	22.9	72.4		2.9	1.8		
Hungary	( <sup>2</sup> )	32,667		50.0	38.0	12.0			
Total	571	1,008,035	.5	10.3	64.0	2.7	19.3	3.1	.1

<sup>1</sup> No information given.<sup>2</sup> Figures are from German center at Reichenberg; figures from Prague received too late for inclusion.<sup>6</sup> No information, on account of strike.<sup>7</sup> No mining industry.**Wages in the Belgian Building Industry**

**A**N AGREEMENT concluded between the employers' and the workers' organizations in the Belgian building industry provides for quarterly adjustments of wages for a period of one year beginning April 1, 1929, according to a report from Marion Letcher, American consul general, Antwerp, dated May 15, 1929.

The regular working week is 48 hours, and work may begin not earlier than 7 a. m. and end not later than 5 p. m. during the first five days, with no work on Saturday afternoons.

Wages are increased 50 per cent for dangerous work, such as the building of towers and chimneys where no scaffolding can be erected, and for unhealthful work such as the repair of sewers, drain pipes, etc. Workmen are compensated at the end of each quarter for loss of work on account of the weather or because of lack of work, if they have worked for one employer at least one and one-half months during the quarter.

On account of the large amount of construction work being carried out in Belgium at the present time the demand for labor is greater than the supply and in many cases workmen have demanded and received higher wages than those fixed in the agreement.

The following table gives the hourly wages of skilled and unskilled workers in the Belgian building trades, effective April 1, July 1, and October 1, 1929:

HOURLY WAGES IN BUILDING TRADES FIXED BY COLLECTIVE AGREEMENTS,  
EFFECTIVE APRIL 1, JULY 1, AND OCTOBER 1, 1929

[Exchange rate of franc=2.78 cents]

Occupation	Hourly wages effective					
	Apr. 1		July 1		Oct. 1	
<i>Skilled workers</i>	<i>Francs</i>	<i>Cents</i> <sup>1</sup>	<i>Francs</i>	<i>Cents</i> <sup>1</sup>	<i>Francs</i>	<i>Cents</i> <sup>1</sup>
Concrete specialists.....	6.35	17.7	6.60	18.3	6.95	19.3
Iron braiders.....	6.35	17.7	6.60	18.3	6.95	19.3
Bricklayers.....	6.35	17.7	6.60	18.3	6.95	19.3
Plasterers.....	6.35	17.7	6.60	18.3	6.95	19.3
Seamers.....	6.35	17.7	6.60	18.3	6.95	19.3
Marble workers.....	<sup>2</sup> 6.45	17.9	6.70	18.6	7.05	19.6
Marble polishers.....	6.35	17.7	6.60	18.3	6.95	19.3
Stone workers.....	<sup>2</sup> 6.45	17.9	6.70	18.6	7.05	19.6
Mosaic workers.....	6.35	17.7	6.60	18.3	6.95	19.3
Asphalt workers.....	6.35	17.7	6.60	18.3	6.95	19.3
Cobble-stone workers.....	6.35	17.7	6.60	18.3	6.95	19.3
Glaziers.....	6.35	17.7	6.60	18.3	6.95	19.3
Parquet floorers.....	6.35	17.7	6.60	18.3	6.95	19.3
Carpenters.....	<sup>2</sup> 6.45	17.9	6.70	18.6	7.05	19.6
Cabinet makers.....	<sup>2</sup> 6.45	17.9	6.70	18.6	7.05	19.6
Woodworkers (machine):						
First-class turners, molders, etc.....	7.90	22.0	8.15	22.7	8.50	23.6
Turners, band-saw workers, planers, etc.....	7.00	19.5	7.25	20.2	7.60	21.1
Ordinary machine workers, planers, etc.....	6.35	17.7	6.60	18.3	6.95	19.3
Tile layers.....	<sup>2</sup> 6.60	18.3	6.85	19.0	7.20	20.0
Painters.....	6.35	17.7	6.60	18.3	6.95	19.3
White-stone workers.....	<sup>4</sup> 6.95	19.3	7.20	20.0	7.55	21.0
Sculptors.....	<sup>2</sup> 7.00	19.5	7.25	20.2	7.60	21.1
Blacksmiths.....	6.90	19.2	7.15	19.9	7.50	20.9
Electricians.....	6.45	17.9	6.70	18.6	7.05	19.6
Gas placers (fitters).....	6.45	17.9	6.70	18.6	7.05	19.6
Plumbers.....	<sup>2</sup> 6.55	18.2	6.80	18.9	7.15	19.9
Central-heating workers.....	6.35	17.7	6.60	18.3	6.95	19.3
<i>Unskilled workers</i>						
Ground workers (trained).....	5.85	16.3	6.10	17.0	6.45	17.9
Ground workers (ordinary).....	5.40	15.0	5.65	15.7	5.95	16.5
Bricklayers' assistants.....	5.40	15.0	5.65	15.7	5.95	16.5
Plasterers' assistants.....	5.40	15.0	5.65	15.7	5.95	16.5
Other assistants.....	5.40	15.0	5.65	15.7	5.95	16.5

<sup>1</sup> U. S. currency.

<sup>2</sup> Including 10 centimes (0.3 cent) per hour for wear on tools.

<sup>3</sup> Including 25 centimes (0.7 cent) per hour on account of danger of work.

<sup>4</sup> Including 20 centimes (0.6 cent) per hour for wear on tools.



## Wages and Pensions of Coal Miners in Two Departments in France

**T**HE coal miners in the Departments of Pas-de-Calais and Nord secured an increase in wages in April, 1929, amounting to 7 per cent of the basic wages, according to a report from James G. Carter, American consul at Calais, dated May 14, 1929. The agreement fixed the basic wage of underground miners at 38.49 francs (\$1.50) per day and the average wage with the bonus, therefore, is now 40.95 francs (\$1.60). The average daily wage of pit-head miners is 33 francs (\$1.29). The wages are paid for an 8-hour day which includes the time consumed in descending into and coming up from the mines. This is estimated to average  $1\frac{1}{4}$  hours, so that the effective working-day is approximately  $6\frac{3}{4}$  hours.

The full pension payable to miners at the age of 55 after 39 years' service was increased on June 1, 1929, from 3,750 francs to 5,000 francs (\$146.25 to \$195) per year. For shorter periods of service with a minimum of 15 years the pension is correspondingly reduced. After 42 years' service the pension amounts to 5,720 francs (\$223.08) and for each additional year it is increased 60 francs (\$2.34). A pension amounting to 3,840 francs (\$149.76) is paid in case of permanent disability if there is two-thirds incapacity for work and the miner has been employed for at least 10 years.

The mines in these two departments produce from 62 to 64 per cent of the total amount of coal mined in France and employ approximately 68,000 miners.

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## English Agricultural Wages and Hours

**D**URING the year ending September 30, 1928, the agricultural wages committees of England made comparatively few changes in the minimum rates set for farm workers, according to the report of the year's proceedings recently issued by the Department of Agriculture and Fisheries.<sup>1</sup> In 13 districts the minimum weekly wage for adult male workers was set at 30s. (\$7.30) a week, in 3 it was 30s. 6d. (\$7.42), in 10 it was 31s. (\$7.54), and in the remaining 26 it ranged upward to 36s. (\$8.76), which was the rate in two districts. The average minimum wage throughout the country for ordinary male adult workers was 31s. 8d. (\$7.71) per week. As the wage orders provide for payment for overtime, the average earnings were higher than this, but it is difficult to calculate the exact amount of the excess. In the course of certain investigations carried on during the year some data were obtained concerning cases of overtime work.

Careful estimates based on these cases, which cover 4,400 ordinary male workers, show the average weekly earnings to be about 33s. 4d. [\$8.11], or about 1s. 8d. [\$0.41] above the minimum cash wages. This does not, however, include extra earnings at harvest, which vary from county to county. Similar information in regard to 2,200 horsemen and 2,000 stockmen indicates an average inclusive wage for these classes of about 36s. 9d. [\$8.94] and 38s. 6d. [\$9.37] per week, respectively.

<sup>1</sup> Great Britain. Ministry of Agriculture and Fisheries. Report of proceedings under the agricultural wages (regulation) act, for the year ending Sept. 30, 1928. London, 1929.

In every district certain benefits or allowances are habitually given by the farmer to the worker, and to these, cash values are fixed by the wages committees to be used in reckoning the actual cash wage which must be paid the worker. The commonest of the benefits are cottages, board and lodging, milk, and potatoes or ground for raising them. A few other benefits are allowed in individual areas. In Monmouthshire the committee had formerly refused to allow any deductions from the cash wage in respect to benefits, but in 1928 they changed their attitude, set a value on the usual benefits, and now allow these amounts to be deducted from the actual wage paid in cash. As a result, benefits are now recognized as a legitimate part of the wage in every area in England.

### Hours and Holidays

THE WAGES COMMITTEES are empowered to set not only the wages but the hours for which the wages are to be paid, and in this matter there is a good deal of variation in the different districts. The range for ordinary male adult workers is from 48 to 54 hours a week, but the distribution differs with the season. Twelve committees have fixed the minimum weekly wage on the basis of 48 hours in winter and 50 in summer, and 19 on hours ranging from 48 to 52 in winter and from 51 to 54 in summer. In 17 areas the hours are the same all the year round—50 per week in 8 areas, 54 in 7 areas, and 51 and 48 in one area each. For special classes of workers the hours may run higher.

The act under which the committees work provides that they shall "so far as is reasonably practicable," secure a weekly half holiday for workers. This is usually done by providing that employment in excess of a specified number of hours or after a specified time on one day in each week shall be classed as overtime, in the case of an ordinary male worker. The concession is not always made in the case of special workers, or, if made, work in connection with the care of animals is frequently excluded from ranking as overtime. There is a growing desire to secure the observance of Christmas, Good Friday, and the bank holidays as holidays for agricultural workers, and several of the committees have taken action in this matter.

The committees concerned have generally proceeded on the principle of defining employment on one or more of the public holidays as overtime employment, thus entitling a worker who works on such a day to overtime payment over and above the normal weekly wage. In some cases the committees have also made a corresponding reduction, in the week in which the public holiday falls, in the number of hours in respect of which the normal weekly minimum wage is payable, whereas other committees have left unchanged the number of hours on which the weekly minimum rate is based.

### Woman Agricultural Workers

IN GENERAL THE women's wages are fixed as hourly rates, this method being used by all the committees except those for Hertfordshire and Middlesex, where rates are fixed by the week, and Durham where they are fixed by the day. The average minimum rate for ordinary female adult workers is 5½d. (10.8 cents) per hour, the rates ranging from 4½d. to 6d. (9.1 cents to 12.2 cents), except in Northumberland, where the minimum rate for casual workers is 3d. (6.1

cents) per hour. Overtime rates for female workers have been fixed by 26 of the 47 agricultural wages committees.

Complaint has been made that the woman workers have not received from the act the protection to which they are entitled. Owing to these representations, the Ministry of Agriculture and Fisheries made an inquiry into the subject, and under date of September 28, 1928, addressed a letter to the wages committees, pointing out that women, even if not numerously employed, are a factor in farm work, that the act was meant to safeguard their interests as well as those of the men, and that consideration should be given to fulfilling this purpose.

Although women may not be employed to a great extent as general farm hands in the same way as men, numbers of them are to be found engaged in milking, dairy work, market gardening, and other special branches of agriculture which are favorable for their employment and which are, equally with field work, covered by the terms of the agricultural wages (regulation) act, 1924.

As pointed out in a communication on the subject sent to chairmen by my predecessor, the expression "workers" is specifically defined in the act as including women and girls; and there can be no doubt that it was the intention of Parliament that the act should operate equally to the benefit of women and men. I should perhaps mention that the complaints which I have received refer particularly to the absence in many areas of overtime provisions for women for work in excess of the normal and to the failure of certain committees to carry out, in the case of such workers, the direction of Parliament to secure so far as is reasonably practicable a weekly half holiday. It has also been observed, *inter alia*, that in some cases the reckoning of board and lodging as part payment of wages has been defined at the same sum as in the case of men, notwithstanding that the minimum wage out of which the deduction for such provision has to be made is much less in the case of women.

I should be very glad if you would give the whole question your earnest consideration, and, if you feel that action is called for, bring it to the notice of your committee at a convenient opportunity.

### Wage Rates in Rumania, 1928

WAGE rates in certain industries in Rumania in 1928 are given in a report of J. Rives Childs, American consul in charge at Bucharest, April 2, 1929. Table 1 relates to industrial workers and Table 2 to agricultural workers.

TABLE 1.—HOURLY WAGE SCALES IN VARIOUS INDUSTRIES IN 1928

[Exchange rate of leu=0.61 cent]

Industry	Maximum wages of skilled workers		Minimum wages of factory laborers	
	Leu	U. S. currency	Leu	U. S. currency
Metallurgical.....	27.60	\$0.17	12.25	\$0.07
Furniture and carpentry.....	30.00	.18	12.80	.08
Leather.....	26.30	.16	11.00	.07
Chemical.....	26.00	.16	10.00	.06



TABLE 2.—DAILY WAGES IN AGRICULTURE, JUNE, 1928

[Exchange rate of leu=0.61 cent]

Province	Men		Women		Children	
	Leu	U. S. currency	Leu	U. S. currency	Leu	U. S. currency
Muntonia (old Kingdom).....	60-70	\$0.37-\$0.43	40-50	\$0.24-\$0.31	30-40	\$0.18-\$0.24
Moldavia (old Kingdom).....	60-70	.37- .43	40-50	.24- .31	30-40	.18- .24
Dobrudja.....	70-80	.43- .49	60-70	.37- .43	30-40	.18- .24
Bukowina.....	60-80	.37- .49	50-60	.31- .37	30-40	.18- .24
Bessarabia.....	70-80	.43- .49	50-60	.31- .37	30-40	.18- .24
Transylvania.....	70-90	.43- .55	60-70	.37- .43	40-50	.24- .31

### Wages in the Glass Industry in Yugoslavia

THE daily wages in the glass industry in Yugoslavia as established by collective agreement are reported by Mr. W. Perry George, American consul at Belgrade, Yugoslavia, under date of April 25, 1929, as shown in the statement following. The glass factories are located at Hrastnik, Zadolj, Sv. Kriz, and Paracin. The wages are understood to be for eight hours' work at the furnace.

Housing, fuel, and light are free and repair of dwellings is also free. Six holidays per annum are granted. The following reductions from the wages are made: In case of poor or flinty glass, 75 per cent of the average earnings; and in case of cold furnace or breakage the reduction is from 50 to 75 per cent.

The daily wage scale for the various classes of work is as follows:

	Dinars <sup>1</sup>	U. S. currency
Hollow glass and machine glass.....	96. 33	\$1. 73
Pressed glass.....	100. 87	1. 82
Bottles and flasks.....	90. 70	1. 63
Larger flasks.....	105. 70	1. 90
Special difficult work:		
5 to 6 liters.....	115. 00	2. 07
8 to 10 liters.....	120. 00	2. 16
12 to 15 liters.....	125. 00	2. 25
20 to 25 liters.....	135. 00	2. 43
30 to 40 liters.....	150. 00	2. 70
50 liters and over.....	175. 00	3. 15
Wolf machine:		
1½ liters.....	110. 00	1. 98
2 liters.....	115. 00	2. 07
3 liters.....	120. 00	2. 16
4 liters.....	130. 00	2. 34
5 liters.....	150. 00	2. 70

<sup>1</sup> Exchange rate of dinar=1.8 cents.

## LABOR AGREEMENTS AND AWARDS

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### Award in Case of Street Railway Employees, Indianapolis

THE Public Service Commission of Indiana, sitting as a board of arbitration in the matter of a petition by employees of the Indianapolis Street Railway Co., under date of May 24, 1929, denied the petitioners' request for an increase in wages.

On October 24, 1928, employees of the Indianapolis Street Railway Co. filed with the Public Service Commission of Indiana a petition for arbitration of certain grievances, among which was the rate of wages paid. The employees requested an increase of the hourly rate paid to platform men operating 2-man cars from 45 cents to 60 cents, and to operators of 1-man cars from 50 cents to 65 cents. Another grievance was in regard to the extra men who report for runs but do not receive work. The employees requested that men on the extra list receive a minimum of five hours' time when reporting for work.

February 20, 1929, the Indianapolis Street Railway Co. notified the Public Service Commission of Indiana that it had made an increase of 4 cents per hour in the wages of its car-service men.<sup>1</sup>

The commission's statement was, in part, as follows:

After considering all the evidence, the commission is of the opinion that no further increase in the wages of the car-service men of the Indianapolis Street Railway Co. can be made at this time. This commission, through the medium of monthly reports required of the Indianapolis Street Railway Co., is in constant touch with its revenues. If these reports indicate any improvement in the earnings of the company during the year 1929 beyond that required to meet the 4 cent per hour increase in wages already ordered, this commission will consider the same in connection with the existing wage scale of the car-service men.

The commission is of the opinion that some action should be taken in regard to extra men who show up for runs and do not receive work. There is, however, no evidence in the record upon which to base a proper award in this matter. It is the opinion of the commission that the respondent should be directed to keep a record concerning this matter for a period of 60 days and file a report with the commission concerning same. This report should show the number of men showing up for work who did not receive a run, time spent by such extra men, and other pertinent information. Upon the filing of this report the commission will take such action in regard to this matter as the facts warrant.

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### National Agreement in Gas Industry, Italy

IN THE issue of *Il Lavoro Fascista* for April 25, 1929, there is an account of the new national contract, effective January 1, 1928, made between the gas employers (*Nazionale d'Impiego per gli Impiegati delle Aziende private del Gas d'Italia*) and their employees (*Federazione Nazionale Fascista delle Industrie del Gas e degli Acquadotti*). This is the first complete agreement ever made between these parties. In addition to being signed by representatives of the parties interested it is signed by Benito Mussolini, representing the National Fascist Labor Organization.

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<sup>1</sup> See Monthly Labor Review, April, 1929, p. 155.

The agreement covers all connected with the gas industry, except technicians, administrators, and those possessing large discretionary powers. Though the agreement, like other Italian agreements covering an entire industry, concerns wages, the basic wage is not mentioned, that item being left to the employers and employees to settle locally under general directions. Thus the greater part of the cost-of-living bonus is to be made a part of the basic wage and the remainder is to be equalized semiannually by agreement between the parties. Hourly wages are to be based on a month of 25 days. Overtime work is to be allowed only in exceptional cases and is to be paid for at 30 per cent additional for the first two hours, 60 per cent for the next two, and 100 per cent thereafter each day and is paid on the total wage received.

In addition to regular promotions from grade to grade or for merit a biennial increase in pay of at least 5 per cent is to be made up to the thirty-fifth year of service. A bonus of one month's pay is to be given at the end of each year. At the end of 20 years of service an employee is to receive a vacation of 30 days yearly in addition to time specially granted and sick leave taken during the year. After seven years of service, leave for from three to six months is to be granted in case of sickness without loss of pay. Leave for a longer period of time is to be granted on half pay.

Dismissals are to be made for cause alone. No one is to be punished without having had the charges laid before him and being afforded an opportunity to make due explanation thereof.

Ex-service men who served in the World War have their vacation periods, sick leave, biennial increases in pay, and overtime scale increased proportionately to their length of service, bravery shown, wounds received, and decorations obtained for valor, and their term of service with the employing company is to be considered as dating from January 1 1928.



## STABILITY OF EMPLOYMENT

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### Stability of Employment in the Pottery Industry

THE present study of the pottery industry was made by the Bureau of Labor Statistics for the purpose of measuring the degree of regularity of employment and to ascertain whether regularity of employment has improved during recent years. The plan of analysis is the same as that employed in similar studies of various industries previously published in the Labor Review, as follows: Railroad industry, in August, 1928; iron and steel industry, in November, 1928; men's clothing industry, in January, 1929; automobile industry, in February, 1929; leather industry, in March, 1929; boot and shoe industry, in March, 1929; slaughtering and meat-packing industry, in April, 1929; paper and pulp industry, in April, 1929; silk industry, in May, 1929; cotton industry, in June, 1929; and fertilizer industry, in June, 1929.

The basic data for the study are derived from the monthly reports made to the Bureau of Labor Statistics by most of the important potteries as part of the general employment survey made monthly by the bureau and covering almost 12,000 manufacturing plants in various lines of industry. As these reports give only the number of employees of all kinds without separation by occupational groups, the present analysis must disregard occupational differences and treat the employees of a plant as a unit.

The method here employed for the measurement of stability is that of the relationship of average monthly employment during the year to the number of employees in the month of maximum employment. Thus, if during 1927 a particular plant had a monthly average of 90 employees and the maximum number in any month was 100, then the stability of employment may be fairly said to be 90 per cent. In other words, if the 100 men needed to fill the positions at the busiest season had no other opportunity for work, then each man would have an opportunity of 90 per cent of full-time employment. Of course, this is rarely quite true, but it is often substantially true; and, in any case, the method offers a fairly accurate measure of the degree in which a particular establishment has attained a condition of stable employment. On the other hand, failure of an establishment to obtain a good level of stability in one or all occupations must not necessarily be attributed to faulty management. Many factors over which the management has little or no control may affect the stability of employment. Nevertheless, an employment stability of or very near to 100 per cent is the desirable goal.

## Results of the Study

THE PERCENTAGES of full-time employment (computed as described above) are presented for each of the years 1923 to 1928 for 27 potteries.

The average rate of stability of employment for all potteries combined, as shown at the end of the table following, indicates that employment in this industry is not stable or constant. It also shows that in the initial year of the study, (1923) employment conditions were better than at any time since that year.

In 1923 most of the potteries had a stability rate of 90 per cent or more, while in 1928 less than half had a rate as high as 90 per cent. For the intervening years (1924 to 1927) the rates were well under the 1923 rate and about on a level with 1928.

The potteries with rates under 80 per cent decreased in 1928 showing that the industry as a whole was improving slightly in stability conditions when compared with the past few years.

The first part of the table shows considerable fluctuation in employment conditions in individual potteries from year to year. Only 2 potteries (Nos. 8 and 11) had a rate of 90 per cent or more for each year during the period 1923 to 1928.

PER CENT OF FULL-TIME EMPLOYMENT IN THE POTTERY INDUSTRY

Plant No.	Location <sup>1</sup>	1923	1924	1925	1926	1927	1928
1	Pennsylvania.....	90.4	92.2	81.7	93.9	86.0	98.0
2	East Liverpool, Ohio.....	95.5	88.3	93.7	96.3	94.0	95.6
3	Trenton, N. J.....	91.0	91.2	87.8	91.0	89.0	95.4
4	Pennsylvania.....	95.1	86.8	92.1	91.3	90.4	93.9
5	California.....	91.9	96.2	93.9	76.1	83.8	93.5
6	Trenton, N. J.....	83.7	97.9	97.8	97.7	91.9	93.3
7	Ohio.....	100.0	96.6	87.1	88.9	79.1	93.0
8	New York.....	91.6	93.4	95.2	90.0	98.2	92.9
9	Ohio.....	92.4	90.5	81.1	88.2	88.0	92.9
10	do.....	92.9	82.5	77.3	84.9	79.9	92.1
11	Evansville, Ind.....	96.0	99.2	93.3	100.0	96.4	91.3
12	West Virginia.....	97.3	94.9	81.1	100.0	73.0	90.6
13	do.....	94.3	96.4	81.5	90.5	75.3	89.7
14	Trenton, N. J.....	77.5	86.1	78.9	83.4	87.3	89.3
15	Ohio.....	96.4	87.5	84.6	94.0	90.6	89.3
16	East Liverpool, Ohio.....	96.8	88.6	99.0	90.9	90.3	89.2
17	Trenton, N. J.....	91.6	88.2	84.0	81.1	85.9	86.7
18	do.....	92.1	94.1	87.5	87.3	94.0	86.4
19	California.....	92.2	55.9	40.4	80.2	65.0	84.6
20	Ohio.....	94.4	92.2	93.5	72.8	83.9	83.5
21	Sebring, Ohio.....	91.1	86.6	80.4	87.3	59.9	83.5
22	Trenton, Ohio.....	91.1	96.7	95.5	94.4	92.6	83.4
23	do.....	93.3	85.6	90.6	91.7	88.5	82.5
24	Evansville, Ind.....	85.0	91.2	93.1	76.8	94.3	81.4
25	Maryland.....	91.3	89.9	92.9	95.3	92.9	81.3
26	Trenton, N. J.....	88.5	76.0	75.6	76.7	75.3	80.9
27	East Liverpool, Ohio.....	91.3	67.1	77.8	74.2	78.8	73.0
	Average.....	92.0	88.6	85.8	88.0	85.3	88.4
	Highest.....	100.0	99.2	99.0	100.0	98.2	98.0
	Lowest.....	77.5	55.9	40.4	72.8	59.9	73.0
	Per cent of plants with employment stability of:						
	95 per cent and over.....	25.9	22.2	14.8	18.5	7.4	11.1
	90.0 to 94.9 per cent.....	59.3	29.6	29.6	33.3	33.3	33.3
	85.0 to 89.9 per cent.....	7.4	33.3	11.1	14.8	22.2	22.2
	80.0 to 84.9 per cent.....	3.7	3.7	25.9	14.8	7.4	29.6
	Under 80.0 per cent.....	3.7	11.1	18.5	18.5	29.6	3.7

<sup>1</sup> When the name of the city might identify the plant only the State is shown.

# TREND OF EMPLOYMENT

## Summary for May, 1929

**E**MPLOYMENT increased 0.2 per cent in May, 1929, as compared with April, and pay-roll totals increased 0.7 per cent, according to reports made to the Bureau of Labor Statistics.

The industrial groups surveyed, the number of establishments reporting in each group, the number of employees covered, and the total pay rolls for one week, for both April and May, together with the per cents of change in May, are shown in the following table:

Industry	Estab- lish- ments	Employment		Per cent of change	Pay roll in 1 week		Per cent of change
		April, 1929	May, 1929		April, 1929	May, 1929	
1. Manufacturing.....	12,636	3,545,357	3,552,960	<sup>1</sup> +0.1	\$99,629,414	\$99,848,169	+0.2
2. Coal mining.....	1,345	310,738	306,996	-1.2	7,506,561	8,015,157	+6.8
Anthracite.....	162	114,063	117,483	+3.0	3,097,110	3,471,584	+12.1
Bituminous.....	1,183	196,675	189,513	-3.6	4,409,451	4,543,573	+3.0
3. Metalliferous mining.....	339	59,267	59,404	+0.2	1,839,833	1,840,157	+(?)
4. Public utilities.....	9,189	684,650	702,258	+2.6	20,353,570	20,768,351	+2.0
5. Trade.....	5,520	203,721	207,032	+1.6	5,097,951	5,157,520	+1.2
Wholesale.....	1,246	42,730	43,202	+1.1	1,281,079	1,295,898	+1.2
Retail.....	4,274	160,991	163,830	+1.8	3,816,872	3,861,622	+1.2
6. Hotels.....	1,800	146,463	143,998	-1.6	<sup>2</sup> 2,492,560	<sup>2</sup> 2,451,222	-1.7
7. Canning and preserving.....	280	33,735	23,052	-31.6	682,148	491,273	-28.0
<b>Total.....</b>	<b>31,109</b>	<b>4,983,871</b>	<b>4,995,700</b>	<b>+0.2</b>	<b>137,602,037</b>	<b>138,571,849</b>	<b>+0.7</b>

<sup>1</sup> Weighted per cent of change for the combined 54 manufacturing industries, repeated from Table 2, p. 185; the remaining per cents of change, including total, are unweighted.

<sup>2</sup> Less than one-tenth of 1 per cent.

<sup>3</sup> Cash payments only; see text, p. 198.

Increases in employment were shown in May in manufacturing, anthracite mining, metalliferous mining, public utilities, wholesale trade, and retail trade, while bituminous-coal mining, hotels, and canning and preserving showed decreased employment. The increase in employment in manufacturing industries is the first increase in employment reported in May since May, 1922, although pay-roll totals have increased in May four times since 1922.

For convenient reference the latest data available relating to all employees, excluding executives and officials, on CLASS I RAILROADS, drawn from Interstate Commerce Commission reports, are shown in the following statement. These reports are for the months of March and April, instead of for April and May, consequently the figures can not be included in the foregoing table.

Industry	Employment		Per cent of change	Amount of pay roll in entire month		Per cent of change
	Mar. 15, 1929	Apr. 15, 1929		March 1929	April 1929	
Class I railroads.....	1,611,407	1,648,624	+2.3	\$233,209,099	\$233,276,766	+(?)

<sup>1</sup> Less than one-tenth of 1 per cent.

More than 6,600,000 employees, including railroad employees, are represented in this summary, with combined earnings in one week of approximately \$191,225,000.



## 1. Employment in Selected Manufacturing Industries in May, 1929

### Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, April and May, 1929

**E**MPLOYMENT in manufacturing industries *increased* 0.1 per cent in May, 1929, as compared with April, and pay-roll totals *increased* 0.2 per cent, this being the first time since the Bureau of Labor Statistics, in July, 1922, began its enlarged survey of manufacturing industries that employment has been greater in May than in April, but the fourth time that pay-roll totals have increased in May as compared with April.

All industries in the iron and steel group, except steam fittings, continued to expand in May, as did the cotton, hosiery, and woolen goods industries, and also the sawmill, millwork, printing, petroleum refining, cement, brick, car repairing, electrical goods, rubber tire, shipbuilding, slaughtering, ice cream, and baking industries. The outstanding decrease in employment in May was the drop of 46 per cent in the fertilizer industry, marking the end of its spring season.

The rayon and radio industries, which are not yet included in the bureau's indexes, followed opposite courses in May. Rayon showed decreased employment of 9 per cent, due to unsettled labor conditions in certain sections, and radio showed a seasonal gain of nearly 25 per cent.

This May report is based upon returns made by 12,588 establishments in 54 of the leading manufacturing industries of the United States. These establishments in May had 3,518,362 employees, whose combined earnings in one week were \$99,022,456.

The Bureau of Labor Statistics' weighted index of employment in manufacturing industries for May, 1929, is 99.2, as compared with 99.1 for April, 1929, and 93 for May, 1928; the weighted index of pay-roll totals for May, 1929, is 104.8, as compared with 104.6 for April, 1929, and 94.1 for May, 1928. The monthly average for 1926 equals 100.

Five of the nine geographic divisions showed more employees and higher pay-roll totals in manufacturing industries in May than in April, the outstanding gains having been in the far Western States, as they were in April; the New England, South Atlantic, and South Central divisions all reported decreased employment and smaller pay-roll totals in May.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN APRIL AND MAY, 1929

Industry	Estab-lish-ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1929	May, 1929		May, 1929	April, 1929	
<b>Food and kindred products.....</b>	<b>1, 832</b>	<b>219, 757</b>	<b>221, 939</b>	( <sup>1</sup> )	<b>\$5, 824, 788</b>	<b>\$5, 686, 670</b>	( <sup>1</sup> )
Slaughtering and meat pack- ing.....	194	83, 917	85, 215	+1. 5	2, 224, 873	2, 188, 789	+1. 6
Confectionery.....	305	29, 679	29, 739	+0. 2	555, 858	545, 587	+1. 9
Ice cream.....	305	11, 839	12, 325	+4. 1	409, 930	393, 253	+4. 2
Flour.....	353	15, 865	15, 684	-1. 1	428, 616	414, 849	+3. 3
Baking.....	659	66, 969	67, 918	+1. 4	1, 858, 408	1, 786, 254	+4. 0
Sugar refining, cane.....	16	11, 488	11, 058	-3. 7	347, 103	357, 938	-3. 0

Footnotes at end of table.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN APRIL AND MAY, 1929—Continued

Industry	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1929	May, 1929		April, 1929	May, 1929	
<b>Textiles and their products</b>	<b>2, 166</b>	<b>629, 656</b>	<b>626, 226</b>	(1)	<b>\$12, 499, 156</b>	<b>\$12, 353, 555</b>	(1)
Cotton goods	480	219, 861	220, 219	+0.2	3, 549, 917	3, 505, 982	-1.2
Hosiery and knit goods	347	97, 223	97, 380	+0.2	1, 907, 355	1, 906, 255	-0.1
Silk goods	284	66, 976	66, 074	-1.3	1, 459, 932	1, 438, 221	-1.5
Woolen and worsted goods	188	61, 482	61, 806	+0.5	1, 392, 893	1, 409, 215	+1.2
Carpets and rugs	30	25, 576	25, 184	-1.5	644, 501	638, 882	-0.9
Dyeing and finishing textiles	112	34, 635	34, 243	-1.1	883, 864	876, 345	-0.9
Clothing, men's	308	62, 445	61, 834	-1.0	1, 345, 761	1, 385, 952	+3.0
Shirts and collars	125	22, 507	22, 400	-0.5	364, 822	343, 249	-5.9
Clothing, women's	209	25, 831	24, 799	-4.0	635, 858	573, 425	-9.8
Millinery and lace goods	83	13, 120	12, 287	-6.3	314, 253	281, 029	-10.6
<b>Iron and steel and their products</b>	<b>1, 927</b>	<b>729, 733</b>	<b>736, 553</b>	(1)	<b>23, 300, 008</b>	<b>23, 495, 060</b>	(1)
Iron and steel	204	282, 591	285, 897	+1.2	9, 487, 172	9, 585, 038	+1.0
Cast-iron pipe	41	11, 777	12, 009	+2.0	275, 242	279, 909	+1.7
Structural ironwork	169	27, 413	27, 890	+1.7	830, 259	847, 017	+2.0
Foundry and machine-shop products	1, 064	279, 847	283, 800	+1.4	8, 889, 758	8, 992, 127	+1.2
Hardware	68	32, 618	32, 823	+0.6	851, 760	864, 622	+1.5
Machine tools	150	40, 198	40, 397	+0.5	1, 358, 157	1, 350, 117	-0.6
Steam fittings and steam and hot-water heating apparatus	112	34, 585	33, 199	-4.0	1, 022, 182	982, 095	-3.9
Stoves	119	20, 704	20, 838	+0.6	585, 478	594, 135	+1.5
<b>Lumber and its products</b>	<b>1, 442</b>	<b>247, 731</b>	<b>250, 598</b>	(1)	<b>5, 479, 692</b>	<b>5, 604, 008</b>	(1)
Lumber, sawmills	678	147, 923	151, 260	+2.3	3, 052, 526	3, 202, 333	+4.9
Lumber, millwork	338	35, 169	35, 404	+0.7	839, 831	846, 759	+0.8
Furniture	426	64, 639	63, 844	-1.2	1, 587, 325	1, 554, 916	-2.0
<b>Leather and its products</b>	<b>449</b>	<b>132, 736</b>	<b>132, 099</b>	(1)	<b>2, 881, 731</b>	<b>2, 886, 893</b>	(1)
Leather	132	26, 056	26, 007	-0.2	658, 669	664, 969	+1.0
Boots and shoes	317	106, 680	106, 092	-0.6	2, 223, 062	2, 221, 924	-0.1
<b>Paper and printing</b>	<b>1, 176</b>	<b>207, 023</b>	<b>207, 602</b>	(1)	<b>6, 972, 089</b>	<b>7, 028, 976</b>	(1)
Paper and pulp	212	59, 477	59, 304	-0.3	1, 638, 147	1, 634, 045	-0.3
Paper boxes	187	19, 328	19, 243	-0.4	449, 849	447, 958	-0.4
Printing, book and job	342	48, 365	48, 849	+1.0	1, 668, 001	1, 704, 347	+2.2
Printing, newspapers	435	79, 853	80, 206	+0.4	3, 216, 092	3, 242, 626	+0.8
<b>Chemicals and allied products</b>	<b>379</b>	<b>105, 955</b>	<b>97, 591</b>	(1)	<b>3, 069, 341</b>	<b>2, 947, 526</b>	(1)
Chemicals	141	37, 646	36, 667	-2.6	1, 071, 321	1, 049, 079	-2.1
Fertilizers	174	18, 203	9, 789	-46.2	316, 960	193, 172	-39.1
Petroleum refining	64	50, 106	51, 135	+2.1	1, 681, 060	1, 705, 275	+1.4
<b>Stone, clay, and glass products</b>	<b>991</b>	<b>128, 884</b>	<b>131, 877</b>	(1)	<b>3, 374, 523</b>	<b>3, 456, 977</b>	(1)
Cement	111	23, 823	24, 540	+3.0	696, 903	726, 506	+4.2
Brick, tile, and terra cotta	629	39, 723	42, 371	+6.7	986, 215	1, 060, 703	+7.6
Pottery	121	21, 318	21, 245	-0.3	540, 053	520, 556	-3.6
Glass	130	44, 020	43, 721	-0.7	1, 151, 352	1, 149, 212	-0.2
<b>Metal products, other than iron and steel</b>	<b>236</b>	<b>60, 372</b>	<b>59, 159</b>	(1)	<b>1, 677, 354</b>	<b>1, 631, 580</b>	(1)
Stamped and enameled ware	75	20, 366	20, 016	-1.7	497, 777	490, 403	-1.5
Brass, bronze, and copper products	161	40, 006	39, 143	-2.2	1, 179, 577	1, 141, 177	-3.3
<b>Tobacco products</b>	<b>250</b>	<b>61, 438</b>	<b>60, 800</b>	(1)	<b>1, 025, 211</b>	<b>1, 024, 460</b>	(1)
Chewing and smoking tobacco and snuff	29	8, 397	8, 142	-3.0	137, 528	130, 874	-4.8
Cigars and cigarettes	221	53, 041	52, 658	-0.7	887, 683	893, 586	+0.7
<b>Vehicles for land transportation</b>	<b>1, 263</b>	<b>654, 515</b>	<b>650, 912</b>	(1)	<b>22, 819, 709</b>	<b>22, 363, 075</b>	(1)
Automobiles	217	483, 327	478, 225	-1.1	17, 410, 635	16, 860, 895	-3.2
Carriages and wagons	50	1, 500	1, 509	+0.6	32, 878	32, 635	-0.7
Car building and repairing, electric-railroad	433	27, 075	27, 685	+2.3	864, 055	873, 876	+1.1
Car building and repairing, steam-railroad	503	142, 613	143, 493	+0.6	4, 512, 141	4, 505, 660	+1.9

Footnotes at end of table.

## TREND OF EMPLOYMENT

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TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN APRIL AND MAY, 1929—Continued

Industry	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1929	May, 1929		April, 1929	May, 1929	
<b>Miscellaneous industries</b> .....	525	367, 557	377, 394	(1)	\$10, 843, 940	\$11, 226, 271	(1)
Agricultural implements.....	77	31, 494	30, 878	-2.0	958, 194	940, 467	-1.9
Electrical machinery, apparatus, and supplies.....	190	178, 030	185, 911	+4.4	5, 380, 889	5, 628, 524	+4.6
Pianos and organs.....	74	8, 238	7, 769	-5.7	242, 290	229, 659	-5.2
Rubber boots and shoes.....	12	16, 970	16, 734	-1.4	404, 299	415, 325	+2.7
Automobile tires.....	44	63, 302	64, 271	+1.5	2, 045, 168	2, 058, 876	+0.7
Shipbuilding.....	80	36, 944	37, 233	+0.8	1, 104, 676	1, 127, 707	+2.1
Rayon <sup>2</sup> .....	12	17, 662	16, 060	-9.1	356, 783	340, 586	-4.5
Radio <sup>3</sup> .....	36	14, 917	18, 538	+24.3	351, 641	485, 127	+38.0
<b>All industries</b> .....	12, 636	3, 545, 357	3, 552, 960	(1)	99, 629, 414	99, 848, 169	(1)

## RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION							
New England <sup>4</sup> .....	1, 497	411, 890	410, 123	-0.4	\$10, 425, 155	\$10, 337, 549	-0.8
Middle Atlantic <sup>5</sup> .....	2, 913	911, 465	916, 112	+0.5	26, 534, 787	26, 670, 082	+0.5
East North Central <sup>6</sup> .....	3, 144	1, 280, 989	1, 288, 588	+0.6	41, 122, 227	41, 179, 840	+0.1
West North Central <sup>6</sup> .....	1, 151	178, 552	180, 272	+1.0	4, 640, 277	4, 722, 958	+1.8
South Atlantic <sup>7</sup> .....	1, 583	352, 388	347, 861	-1.3	7, 063, 780	7, 000, 681	-0.9
East South Central <sup>8</sup> .....	635	136, 919	132, 746	-3.0	2, 664, 424	2, 587, 587	-2.9
West South Central <sup>9</sup> .....	709	103, 477	102, 503	-0.9	2, 352, 682	2, 341, 863	-0.5
Mountain <sup>10</sup> .....	230	32, 293	33, 493	+3.7	921, 492	951, 274	+3.2
Pacific <sup>11</sup> .....	774	137, 384	141, 262	+2.8	3, 904, 590	4, 056, 335	+3.9
<b>All divisions</b> .....	12, 636	3, 545, 357	3, 552, 960	(1)	99, 629, 414	99, 848, 169	(1)

<sup>1</sup> The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting; for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

<sup>2</sup> The rayon industry was surveyed for the first time for the January-February comparison, and the radio industry for the March-April comparison, and, since the data for computing relative numbers are not yet available, these industries are not included in the bureau's indexes of employment and pay-roll totals. The total figures for all manufacturing industries given in the text, p. 183, do not include rayon or radio.

<sup>3</sup> Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.

<sup>4</sup> New Jersey, New York, Pennsylvania.

<sup>5</sup> Illinois, Indiana, Michigan, Ohio, Wisconsin.

<sup>6</sup> Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.

<sup>7</sup> Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.

<sup>8</sup> Alabama, Kentucky, Mississippi, Tennessee.

<sup>9</sup> Arkansas, Louisiana, Oklahoma, Texas.

<sup>10</sup> Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming.

<sup>11</sup> California, Oregon, Washington.

TABLE 2.—PER CENT OF CHANGE, APRIL TO MAY, 1929—12 GROUPS OF MANUFACTURING INDUSTRIES AND TOTAL OF ALL INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees, or wages paid, in the industries]

Group	Per cent of change April to May, 1929		Group	Per cent of change April to May, 1929	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products.....	+1.0	+2.8	Stone, clay, and glass products.....	+2.7	+2.7
Textiles and their products.....	-0.8	-2.1	Metal products, other than iron and steel.....	-2.0	-2.8
Iron and steel and their products.....	+1.1	+0.9	Tobacco products.....	-1.0	(1)
Lumber and its products.....	+1.1	+2.1	Vehicles for land transportation.....	-0.3	-1.2
Leather and its products.....	-0.4	+0.1	Miscellaneous industries.....	+2.4	+2.7
Paper and printing.....	+0.3	+0.9	<b>All industries</b> .....	+0.1	+0.2
Chemicals and allied products.....	-9.6	-4.8			

<sup>1</sup> No change.



**Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, in May, 1928, and May, 1929**

THE LEVEL of employment in manufacturing industries in May, 1929, was 6.7 per cent higher than in May, 1928, and employees' earnings were 11.4 per cent greater.

May, 1929, was the eighth successive month showing a higher level of employment than in the same month of the preceding year, the percentage of increase, which in the first of the seven months (October, 1928) was 0.6 only, having been substantially greater in each succeeding month.

Forty of the fifty-four manufacturing industries had more employees at the end of this 12-month period than at the beginning. The notable increases were: In the machine tool, shipbuilding, and electrical machinery industries, over 30 per cent each; in the agricultural implement industry, over 20 per cent; in the foundry and machine shop product, automobile, carriage and wagon, petroleum refining, and automobile tire industries, over 15 per cent each; in the brass-bronze-copper product industry, 13 per cent; in the fertilizer industry, 8.2 per cent; in the iron and steel industry, 6.5 per cent; in the chemical industry, 5.3 per cent; in the cotton goods industry, 4.9 per cent; and in the woolen and worsted goods industry, 4.5 per cent.

The outstanding decreases in this year-to-year comparison were in the cast-iron pipe, steam fitting, leather, cement, chewing and smoking tobacco, piano and organ, and rubber boot and shoe industries.

Each of the nine geographic divisions showed a considerable increase, both in employment and in pay-roll amounts, in May, 1929, over May, 1928, the notable gains—varying between 6.1 per cent and 12.2 per cent in employment and between 11.1 per cent and 15.5 per cent in pay-roll amounts—having been in the East North Central, Middle Atlantic, and New England States.

**TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, MAY, 1929, WITH MAY, 1928**

[The per cents of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change, May, 1929, compared with May, 1928		Industry	Per cent of change, May, 1929, compared with May, 1928	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
<b>Food and kindred products.</b>	+1.5	+3.5	<b>Textiles and their products—</b>		
Slaughtering and meat packing.....	+2.1	+3.3	Continued.		
Confectionery.....	-0.7	+1.5	Clothing, men's.....	+0.9	+5.0
Ice cream.....	-2.6	-0.5	Shirts and collars.....	+2.1	-1.7
Flour.....	+0.2	+3.3	Clothing, women's.....	+5.0	+6.8
Baking.....	+1.3	+2.6	Millinery and lace goods.....	-0.4	+1.4
Sugar refining, cane.....	+9.0	+15.2	<b>Iron and steel and their</b>		
<b>Textiles and their products.</b>	+3.4	+7.2	<b>products</b> .....	+10.8	+15.2
Cotton goods.....	+4.9	+11.4	Iron and steel.....	+6.5	+11.1
Hosiery and knit goods.....	+3.4	+9.3	Cast-iron pipe.....	-9.8	-9.7
Silk goods.....	+2.4	+4.6	Structural ironwork.....	+7.7	+5.9
Woolen and worsted goods.....	+4.5	+7.0	Foundry and machine-shop		
Carpets and rugs.....	+7.1	+10.3	products.....	+17.2	+23.3
Dyeing and finishing tex-			Hardware.....	+6.6	+13.4
tiles.....	+4.7	+6.3	Machine tools.....	+33.4	+37.6

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, MAY, 1929, WITH MAY, 1928—Continued

Industry	Per cent of change, May, 1929, compared with May, 1928		Industry	Per cent of change, May, 1929, compared with May, 1928	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
<b>Iron and steel and their products—Continued.</b>			<b>Metal products, other than iron and steel</b>		
Steam fittings and steam and hot-water heating apparatus.....	-7.3	-7.5	Stamped and enameled ware.....	+9.0	+15.1
Stoves.....	+5.1	+6.8	Brass, bronze, and copper products.....	+0.8	+2.1
<b>Lumber and its products</b> .....	+1.9	+1.9		+13.0	+20.1
Lumber, sawmills.....	+1.4	+0.4	<b>Tobacco products</b> .....	-2.3	+2.4
Lumber, millwork.....	+0.5	-0.6	Chewing and smoking tobacco and snuff.....	-8.0	-6.5
Furniture.....	+4.6	+8.6	Cigars and cigarettes.....	-1.5	+3.6
<b>Leather and its products</b> .....	-0.2	+4.2	<b>Vehicles for land transportation</b> .....	+10.1	+16.1
Leather.....	-6.9	-3.8	Automobiles.....	+16.9	+18.5
Boots and shoes.....	+2.3	+9.6	Carriages and wagons.....	+15.8	+15.5
<b>Paper and printing</b> .....	+1.7	+5.2	Car building and repairing, electric-railroad.....	-3.0	-3.7
Paper and pulp.....	+1.6	+4.4	Car building and repairing, steam-railroad.....	+0.9	+9.3
Paper boxes.....	+2.3	+5.4	<b>Miscellaneous industries</b> .....	+25.9	+31.5
Printing, book and job.....	+2.6	+5.2	Agricultural implements.....	+23.1	+24.1
Printing, newspapers.....	+2.2	+4.9	Electrical machinery, apparatus, and supplies.....	+31.0	+32.4
<b>Chemicals and allied products</b> .....	+9.2	+9.5	Pianos and organs.....	-13.3	-12.7
Chemicals.....	+5.3	+5.5	Rubber boots and shoes.....	-8.2	-2.7
Fertilizers.....	+8.2	+2.1	Automobile tires.....	+15.0	+19.2
Petroleum refining.....	+15.2	+16.9	Shipbuilding.....	+31.5	+37.4
<b>Stone, clay, and glass products</b> .....	-3.0	-3.0	<b>All industries</b> .....	+6.7	+11.4
Cement.....	-6.7	-8.0			
Brick, tile, and terra cotta.....	-3.7	-4.1			
Pottery.....	+0.5	-2.6			
Glass.....	(1)	+4.1			

## RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION <sup>2</sup>			GEOGRAPHIC DIVISION—contd.		
New England.....	+6.1	+11.3	West South Central.....	+5.1	+10.3
Middle Atlantic.....	+7.4	+11.1	Mountain.....	+3.9	+6.7
East North Central.....	+12.2	+15.5	Pacific.....	+2.4	+3.4
West North Central.....	+2.8	+5.3			
South Atlantic.....	+3.7	+8.0	<b>All divisions</b> .....	+6.7	+11.4
East South Central.....	+0.3	+1.7			

<sup>1</sup> No change.<sup>2</sup> See footnotes 3 to 11, p. 185.

## Per Capita Earnings in Manufacturing Industries in May, 1929

PER CAPITA EARNINGS of employees in the combined 54 manufacturing industries in May, 1929, were 0.1 per cent higher than in April, 1929, and 4.3 per cent higher than in May, 1928.

TABLE 4.—COMPARISON OF PER CAPITA EARNINGS, IN MANUFACTURING INDUSTRIES, MAY, 1929, WITH APRIL, 1929, AND MAY, 1928

Industry	Per cent of change, May, 1929, com- pared with—		Industry	Per cent of change, May, 1929, com- pared with—	
	April, 1929	May, 1928		April, 1929	May, 1928
Fertilizers.....	+13.3	-5.2	Ice cream.....	+0.1	+2.5
Flour.....	+4.5	+3.2	Slaughtering and meat packing.....	+0.1	+1.4
Rubber boots and shoes.....	+4.2	+6.1	Steam fittings and steam and hot-water heating apparatus.....	+0.1	-0.3
Clothing, men's.....	+4.0	+3.8	Paper boxes.....	+ <sup>(1)</sup>	+2.9
Baking.....	+2.6	+1.3	Paper and pulp.....	+ <sup>(1)</sup>	+2.7
Lumber, sawmills.....	+2.6	-0.7	Iron and steel.....	-0.1	+4.7
Confectionery.....	+1.7	+2.3	Silk goods.....	-0.1	+2.3
Cigars and cigarettes.....	+1.4	+5.0	Hosiery and knit goods.....	-0.2	+5.6
Shipbuilding.....	+1.3	+4.4	Cast-iron pipe.....	-0.3	+0.1
Car building and repairing, steam-railroad.....	+1.2	+7.7	Foundry and machine-shop products.....	-0.3	+5.2
Cement.....	+1.2	-1.1	Petroleum refining.....	-0.6	+1.7
Printing, book and job.....	+1.2	+2.6	Automobile tires.....	-0.9	+3.3
Leather.....	+1.1	+3.1	Furniture.....	-0.9	+3.8
Hardware.....	+0.9	+6.0	Car building and repairing, elec- tric-railroad.....	-1.1	-0.9
Brick, tile, and terra cotta.....	+0.8	-0.8	Machine tools.....	-1.1	+3.0
Stoves.....	+0.8	+1.5	Brass, bronze, and copper prod- ucts.....	-1.2	+6.5
Carpets and rugs.....	+0.7	+3.1	Carriages and wagons.....	-1.3	-0.3
Sugar refining, cane.....	+0.7	+5.5	Cotton goods.....	-1.4	+6.3
Woolen and worsted goods.....	+0.6	+2.1	Chewing and smoking tobacco and snuff.....	-1.9	+1.9
Boots and shoes.....	+0.5	+6.8	Automobiles.....	-2.1	+1.5
Chemicals.....	+0.5	+0.2	Pottery.....	-3.3	-3.1
Glass.....	+0.5	+3.6	Millinery and lace goods.....	-4.5	+1.9
Pianos.....	+0.5	+0.5	Shirts and collars.....	-5.5	-3.6
Printing, newspapers.....	+0.4	+2.5	Clothing, women's.....	-6.1	+1.6
Dyeing and finishing textiles.....	+0.3	+1.1			
Structural ironwork.....	+0.3	-1.7			
Electrical machinery, appara- tus, and supplies.....	+0.2	+1.1			
Lumber, millwork.....	+0.2	-1.0			
Stamped and enameled ware.....	+0.2	+1.4			
Agricultural implements.....	+0.1	+0.6			
			<b>All industries.....</b>	<b>+0.1</b>	<b>+4.3</b>

<sup>1</sup> Less than one-tenth of 1 per cent.

### Wage Changes in Manufacturing Industries

ONE HUNDRED AND FIFTY-SEVEN ESTABLISHMENTS in 24 manufacturing industries reported wage-rate increases made during the month ending May 15, 1929. These increases averaged 7 per cent and affected 17,421 employees, or 57 per cent of all employees in the establishments concerned.

Fifteen establishments in nine industries reported wage-rate decreases during the same period. These decreases averaged 9 per cent and affected 780 employees, or 57 per cent of all employees in the establishments concerned.

One hundred and three establishments reporting increases in wage rates were in the two car building and repairing industries. These increases, combined with reports for February, March, and April, make a total of 55,000 employees in 300 car shops, who received wage-rate increases between January 15 and May 15.



TABLE 5.—WAGE ADJUSTMENTS OCCURRING BETWEEN APRIL 15 AND MAY 15, 1929

Industry	Establishments		Per cent of increase or decrease in wage rate		Employees affected		
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Per cent of employees—	
						In establishments reporting increase or decrease in wage rates	In all establishments reporting
			Increases				
Slaughtering.....	194	1	7.0	7.0	50	6	(1)
Confectionery.....	305	1	10.0	10.0	25	48	(1)
Baking.....	659	6	3.0-10.0	7.1	158	13	(1)
Cotton goods.....	480	1	10.0	10.0	365	100	(1)
Silk goods.....	284	2	4.0-10.0	9.8	581	51	1
Woolen and worsted goods.....	188	1	5.0	5.0	334	100	1
Iron and steel.....	204	1	5.0	5.0	108	51	(1)
Foundry and machine-shop products.....	1,064	9	3.5-10.0	5.9	1,016	37	(1)
Machine tools.....	150	2	3.5- 5.6	5.1	28	23	(1)
Steam fittings and steam and hot-water heating apparatus.....	112	1	10.0	10.0	150	23	(1)
Lumber, sawmills.....	678	3	6.0-12.5	9.3	317	34	(1)
Lumber, millwork.....	338	1	10.0	10.0	10	22	(1)
Boots and shoes.....	317	1	5.0	5.0	30	16	(1)
Paper boxes.....	187	3	6.0-10.0	8.6	25	7	(1)
Printing, book and job.....	342	1	9.0	9.0	117	100	(1)
Printing, newspapers.....	435	9	1.5- 5.0	2.7	491	31	1
Chemicals.....	141	2	10.0	10.0	112	6	(1)
Brick, tile, and terra cotta.....	629	2	1.0-15.0	6.8	116	62	(1)
Cigars and cigarettes.....	221	1	9.0	9.0	343	64	1
Automobiles.....	217	1	6.5	6.5	41	10	(1)
Carriages and wagons.....	50	3	5.0-17.0	8.4	19	50	(1)
Car building and repairing, electric-railroad.....	433	2	6.4-11.0	9.7	148	94	1
Car building and repairing, steam-railroad.....	563	101	4.0- 9.6	6.9	12,780	82	9
Electrical machinery, apparatus, and supplies.....	190	2	5.0-10.0	6.2	57	7	(1)
			Decreases				
Silk goods.....	284	1	7.0	7.0	60	48	(1)
Foundry and machine-shop products.....	1,064	3	5.0-17.0	11.8	96	19	(1)
Lumber, millwork.....	338	1	10.0	10.0	38	100	(1)
Furniture.....	426	1	15.0	15.0	120	92	(1)
Fertilizers.....	174	2	4.3-17.0	7.9	141	100	1
Brick, tile, and terra cotta.....	629	4	4.8-12.5	8.5	92	49	(1)
Brass, bronze, and copper products.....	161	1	3.5	3.5	30	100	(1)
Cigars and cigarettes.....	221	1	10.0	10.0	80	89	(1)
Car building and repairing, electric-railroad.....	433	1	4.3	4.3	123	100	(1)

<sup>1</sup> Less than one-half of 1 per cent.

## Indexes of Employment and Pay-Roll Totals in Manufacturing Industries

INDEX NUMBERS for May, 1928, and for March, April, and May, 1929, showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 manufacturing industries surveyed by the Bureau of Labor Statistics, together with general indexes for the combined 12 groups of industries, appear in Table 6.

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, MAY, 1928, AND MARCH, APRIL, AND MAY, 1929

[Monthly average, 1926=100]

Industry	Employment				Pay-roll totals			
	1928	1929			1928	1929		
	May	March	April	May	May	March	April	May
<b>General index</b> .....	<b>93.0</b>	<b>98.6</b>	<b>99.1</b>	<b>99.2</b>	<b>94.1</b>	<b>103.9</b>	<b>104.6</b>	<b>104.8</b>
<b>Food and kindred products</b> .....	<b>95.5</b>	<b>97.4</b>	<b>95.9</b>	<b>96.9</b>	<b>97.0</b>	<b>98.6</b>	<b>97.7</b>	<b>100.4</b>
Slaughtering and meat packing.....	95.8	98.3	96.3	97.8	96.4	97.9	98.0	99.6
Confectionery.....	84.8	88.5	84.0	84.2	86.0	90.8	85.7	87.3
Ice cream.....	96.3	80.6	90.1	93.8	95.9	82.7	91.6	95.4
Flour.....	96.6	101.5	97.9	96.8	98.1	103.1	98.0	101.3
Baking.....	100.7	101.7	100.6	102.0	102.0	102.2	100.7	104.7
Sugar refining, cane.....	86.6	98.1	98.1	94.4	89.0	104.0	105.7	102.5
<b>Textiles and their products</b> .....	<b>94.7</b>	<b>99.9</b>	<b>98.7</b>	<b>97.9</b>	<b>91.9</b>	<b>104.3</b>	<b>100.6</b>	<b>98.5</b>
Cotton goods.....	92.4	98.6	96.7	96.9	87.5	100.1	98.7	97.5
Hosiery and knit goods.....	94.8	97.1	97.8	98.0	96.4	104.1	105.5	105.4
Silk goods.....	96.9	99.9	100.5	99.2	100.5	106.4	106.7	105.1
Woolen and worsted goods.....	93.2	96.5	96.9	97.4	93.2	97.2	98.5	99.7
Carpets and rugs.....	100.5	109.6	109.3	107.6	93.2	104.0	103.7	102.8
Dyeing and finishing textiles.....	98.5	105.2	104.3	103.1	100.2	109.8	107.4	106.5
Clothing, men's.....	87.3	93.7	88.9	88.1	78.7	97.9	80.2	82.6
Shirts and collars.....	90.7	94.4	93.1	92.6	88.9	95.1	92.8	87.4
Clothing, women's.....	106.4	117.2	115.3	110.7	97.9	124.7	116.0	104.6
Millinery and lace goods.....	97.7	101.8	103.8	97.3	94.3	107.5	107.0	95.6
<b>Iron and steel and their products</b> .....	<b>91.6</b>	<b>99.2</b>	<b>100.4</b>	<b>101.5</b>	<b>94.1</b>	<b>105.2</b>	<b>107.4</b>	<b>108.4</b>
Iron and steel.....	91.2	95.0	95.9	97.1	95.3	102.2	104.8	105.9
Cast-iron pipe.....	84.3	73.4	74.5	76.0	83.1	69.9	73.7	75.0
Structural ironwork.....	93.2	98.1	98.7	100.4	97.8	99.3	101.6	103.6
Foundry and machine-shop products.....	92.4	104.4	106.8	108.3	93.6	111.0	114.1	115.4
Hardware.....	87.6	95.3	92.9	93.4	85.6	98.4	95.6	97.1
Machine tools.....	97.7	129.0	129.7	130.3	104.0	142.3	144.0	143.1
Steam fittings and steam and hot-water heating apparatus.....	84.4	82.6	81.4	78.2	86.1	85.7	82.8	79.6
Stoves.....	88.4	90.6	92.4	92.9	85.3	87.3	89.7	91.1
<b>Lumber and its products</b> .....	<b>87.3</b>	<b>86.2</b>	<b>88.0</b>	<b>89.0</b>	<b>89.6</b>	<b>86.8</b>	<b>89.4</b>	<b>91.3</b>
Lumber, sawmills.....	87.2	83.1	86.4	88.4	91.1	82.0	87.2	91.5
Lumber, millwork.....	87.0	86.0	86.8	87.4	88.8	86.4	87.6	88.3
Furniture.....	87.7	94.6	92.9	91.7	85.6	96.7	94.9	93.0
<b>Leather and its products</b> .....	<b>89.5</b>	<b>91.8</b>	<b>89.7</b>	<b>89.3</b>	<b>81.7</b>	<b>88.2</b>	<b>85.0</b>	<b>85.1</b>
Leather.....	95.8	90.0	89.4	89.2	93.9	88.6	89.4	90.3
Boots and shoes.....	87.3	92.2	89.8	89.3	76.3	88.1	83.7	83.6
<b>Paper and printing</b> .....	<b>98.2</b>	<b>100.1</b>	<b>99.6</b>	<b>99.9</b>	<b>100.6</b>	<b>106.4</b>	<b>104.9</b>	<b>105.8</b>
Paper and pulp.....	93.5	95.0	95.3	95.0	94.0	98.4	98.4	98.1
Paper boxes.....	90.4	92.6	92.9	92.5	95.2	101.3	100.7	100.3
Printing, book and job.....	98.3	102.5	99.9	100.9	100.8	108.4	103.7	106.0
Printing, newspapers.....	105.2	106.6	107.1	107.5	107.5	111.5	111.9	112.8
<b>Chemicals and allied products</b> .....	<b>89.2</b>	<b>103.2</b>	<b>107.8</b>	<b>97.4</b>	<b>93.1</b>	<b>102.5</b>	<b>107.0</b>	<b>101.9</b>
Chemicals.....	96.9	105.0	104.7	102.0	102.0	109.1	109.9	107.6
Fertilizers.....	83.3	138.6	167.5	90.1	90.8	125.3	152.2	92.7
Petroleum refining.....	82.2	90.4	92.7	94.7	83.8	92.4	96.6	98.0
<b>Stone, clay, and glass products</b> .....	<b>92.7</b>	<b>84.0</b>	<b>87.5</b>	<b>89.9</b>	<b>92.9</b>	<b>83.3</b>	<b>87.7</b>	<b>90.1</b>
Cement.....	89.7	79.5	81.2	83.7	92.5	77.5	81.7	85.1
Brick, tile, and terra cotta.....	89.1	72.9	80.4	85.8	87.9	69.9	78.3	84.3
Pottery.....	95.8	97.1	96.5	96.3	95.9	94.0	96.9	93.4
Glass.....	96.0	96.0	96.7	96.0	96.0	100.7	100.1	99.9
<b>Metal products, other than iron and steel</b> .....	<b>92.5</b>	<b>101.9</b>	<b>102.9</b>	<b>100.8</b>	<b>94.8</b>	<b>112.3</b>	<b>112.3</b>	<b>109.1</b>
Stamped and enameled ware.....	92.0	93.0	94.3	92.7	94.3	98.6	97.8	96.3
Brass, bronze, and copper products.....	92.6	106.1	107.0	104.6	95.0	117.7	118.0	114.1
<b>Tobacco products</b> .....	<b>94.5</b>	<b>94.2</b>	<b>93.2</b>	<b>92.3</b>	<b>88.9</b>	<b>89.2</b>	<b>91.0</b>	<b>91.0</b>
Chewing and smoking tobacco and snuff.....	92.9	94.3	88.1	85.5	90.7	89.9	89.1	84.8
Cigars and cigarettes.....	94.6	94.2	93.9	93.2	88.6	89.1	91.2	91.8

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, MAY, 1928, AND MARCH, APRIL, AND MAY, 1929--Continued

Industry	Employment				Pay-roll totals			
	1928	1929			1928	1929		
	May	March	April	May	May	March	April	May
<b>Vehicles for land transportation</b>	<b>97.6</b>	<b>106.9</b>	<b>107.8</b>	<b>107.5</b>	<b>102.2</b>	<b>117.2</b>	<b>120.1</b>	<b>118.7</b>
Automobiles	113.8	134.2	134.5	133.0	120.8	144.2	147.8	143.1
Carriages and wagons	70.2	80.8	80.8	81.3	74.1	87.2	86.2	85.6
Car building and repairing, electric-railroad	96.3	93.8	91.3	93.4	99.3	94.8	94.5	95.6
Car building and repairing, steam-railroad	85.0	83.6	85.3	85.8	87.4	91.3	93.7	95.5
<b>Miscellaneous industries</b>	<b>89.8</b>	<b>107.4</b>	<b>110.5</b>	<b>113.1</b>	<b>89.5</b>	<b>112.6</b>	<b>114.6</b>	<b>117.7</b>
Agricultural implements	106.9	129.4	134.3	131.6	112.9	138.5	142.8	140.1
Electrical machinery, apparatus, and supplies	90.1	109.4	113.0	118.0	93.0	115.8	117.7	123.1
Pianos and organs	76.7	72.1	70.5	66.5	72.2	70.3	66.5	63.0
Rubber boots and shoes	99.8	94.3	93.0	91.6	98.0	91.6	92.9	95.4
Automobile tires	99.7	111.4	113.0	114.7	100.2	118.0	118.6	119.4
Shipbuilding	82.6	101.1	107.7	108.6	81.5	102.8	109.7	112.0

Table 7 shows the general index of employment in manufacturing industries and the general index of pay-roll totals, by months, from January, 1923, to May, 1929.

The chart following Table 7 represents the 54 industries combined and shows, by months, the course of pay-roll totals as well as the course of employment. It includes the years 1926 and 1927, as well as 1928, and January, February, March, April, and May, 1929.

TABLE 7.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO MAY, 1929

[Monthly average, 1926=100]

Month	Employment							Pay-roll totals						
	1923	1924	1925	1926	1927	1928	1929	1923	1924	1925	1926	1927	1928	1929
January	106.6	103.8	97.9	100.4	97.3	91.6	95.2	95.8	98.6	93.9	98.0	94.9	89.6	94.5
February	108.4	105.1	99.7	101.5	99.0	93.0	97.4	99.4	103.8	99.3	102.2	100.6	93.9	101.8
March	110.8	104.9	100.4	102.6	99.5	93.7	98.6	104.7	103.3	100.8	103.4	102.0	95.2	103.9
April	110.8	102.8	100.2	101.0	98.6	93.3	99.1	105.7	101.1	98.3	101.5	100.8	93.8	104.6
May	110.8	98.8	98.9	99.8	97.6	93.0	99.2	109.4	96.5	98.5	99.8	99.8	94.1	104.8
June	110.9	95.6	98.0	99.3	97.0	93.1	---	109.3	90.8	95.7	99.7	97.4	94.2	---
July	109.2	92.3	97.2	97.7	95.0	92.2	---	104.3	84.3	93.5	95.2	93.6	91.2	---
August	108.5	92.5	97.8	98.7	95.1	93.6	---	103.7	87.2	95.4	98.7	95.0	94.2	---
September	108.6	94.3	98.9	100.3	95.8	95.0	---	104.4	89.8	94.4	99.3	94.1	95.4	---
October	108.1	95.6	100.4	100.7	95.3	95.9	---	106.8	92.4	100.4	102.9	95.2	99.0	---
November	107.4	95.5	100.7	99.5	93.5	95.4	---	105.4	91.4	100.4	99.6	91.6	96.1	---
December	105.4	97.3	100.8	98.9	92.6	95.5	---	103.2	95.7	101.6	99.8	93.2	97.7	---
<b>Average</b>	<b>108.8</b>	<b>98.2</b>	<b>99.2</b>	<b>100.0</b>	<b>96.4</b>	<b>93.8</b>	<b>97.9</b>	<b>104.3</b>	<b>94.6</b>	<b>97.7</b>	<b>100.0</b>	<b>96.5</b>	<b>94.5</b>	<b>101.9</b>

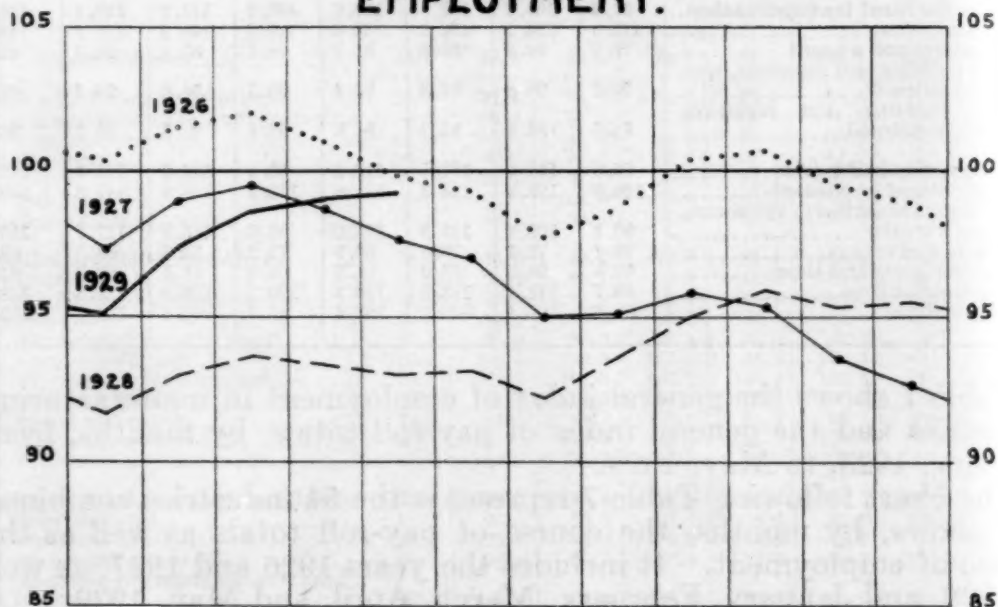
<sup>1</sup> Average for 5 months.



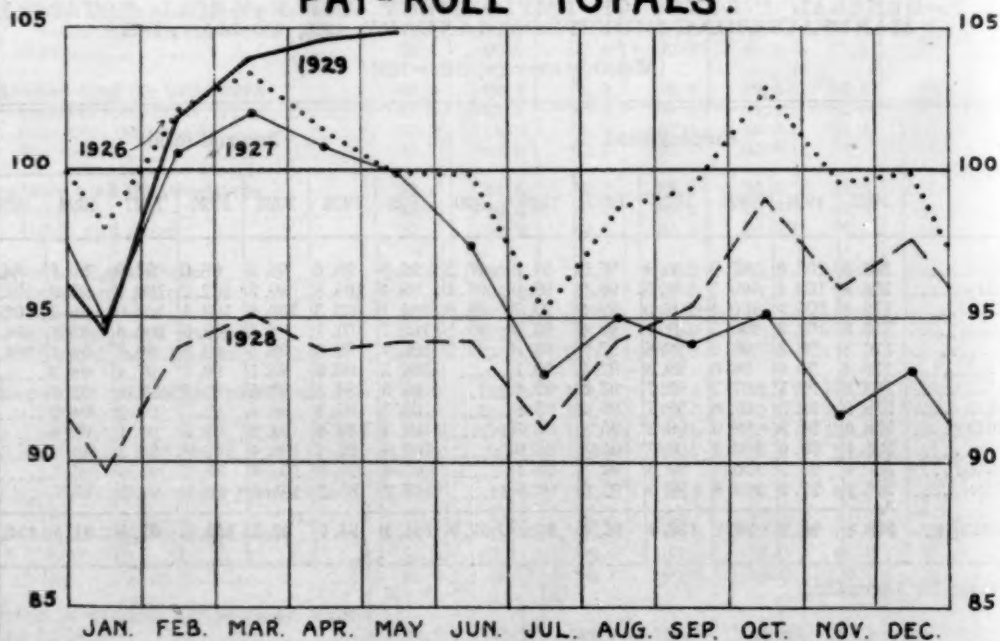
# MANUFACTURING INDUSTRIES. MONTHLY INDEXES, 1926-1929.

MONTHLY AVERAGE 1926 = 100.

## EMPLOYMENT.



## PAY-ROLL TOTALS.



# Force Employed in Manufacturing Industries in May, 1929, and Time Worked by Employees

TEN THOUSAND ONE HUNDRED AND TWENTY-FIVE ESTABLISHMENTS in the 54 manufacturing industries reported as to force employed in May, 1929, and as to the working time of employees. Thirty-nine per cent of the establishments had a full normal force of employees, 61 per cent were working with reduced forces, and less than one-half of 1 per cent were idle; employees in 84 per cent of the establishments were working full time and employees in 15 per cent were working part time.

The establishments in operation had an average of 93 per cent of a full normal force of employees who were working an average of 98 per cent of full time, these percentages being identical with those shown in the April report.

TABLE 8.—PROPORTION OF FORCE EMPLOYED IN MANUFACTURING INDUSTRIES AND OF TIME WORKED BY EMPLOYEES IN MAY, 1929

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked—		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
			Full time	Part time		Full normal force	Part normal force	
<b>Food and kindred products</b>	<b>1,418</b>	<b>(1)</b>	<b>85</b>	<b>14</b>	<b>98</b>	<b>34</b>	<b>66</b>	<b>86</b>
Slaughtering and meat packing	153		93	7	100	46	54	91
Confectionery	247		66	34	95	12	88	69
Ice cream	174		89	11	99	9	91	75
Flour	269	(1)	80	20	95	39	60	87
Baking	563		93	7	99	47	53	97
Sugar refining, cane	12		83	17	99		100	80
<b>Textiles and their products</b>	<b>1,778</b>	<b>1</b>	<b>87</b>	<b>12</b>	<b>98</b>	<b>41</b>	<b>58</b>	<b>90</b>
Cotton goods	440	1	87	12	98	38	60	88
Hosiery and knit goods	294	1	88	11	97	40	59	94
Silk goods	251	1	92	7	99	50	49	95
Woolen and worsted goods	176		87	13	97	36	64	86
Carpets and rugs	26		88	12	97	42	58	106
Dyeing and finishing	101		73	27	96	32	68	90
Clothing, men's	214	5	84	12	98	38	57	86
Shirts and collars	80		96	4	100	56	44	96
Clothing, women's	140	1	89	9	99	50	49	97
Millinery and lace goods	56		86	14	98	25	75	89
<b>Iron and steel and their products</b>	<b>1,657</b>	<b>1</b>	<b>79</b>	<b>21</b>	<b>98</b>	<b>42</b>	<b>58</b>	<b>94</b>
Iron and steel	162	2	71	27	96	38	60	92
Cast-iron pipe	38		45	55	81	13	87	75
Structural ironwork	154		88	12	99	35	65	92
Foundry and machine-shop products	901		81	19	99	44	56	97
Hardware	48		73	27	95	27	73	90
Machine tools	142		90	10	101	68	32	119
Steam fittings and steam and hot-water heating apparatus	106		70	30	96	37	63	78
Stoves	106		64	36	92	34	66	92
<b>Lumber and its products</b>	<b>1,060</b>	<b>(1)</b>	<b>77</b>	<b>23</b>	<b>97</b>	<b>32</b>	<b>68</b>	<b>86</b>
Lumber, sawmills	452	1	82	18	99	38	61	86
Lumber, millwork	250		71	29	96	25	75	79
Furniture	358		74	26	96	30	70	88
<b>Leather and its products</b>	<b>399</b>	<b>1</b>	<b>80</b>	<b>19</b>	<b>97</b>	<b>38</b>	<b>61</b>	<b>90</b>
Leather	116	1	90	9	99	27	72	83
Boots and shoes	283	1	76	23	96	42	57	91

<sup>1</sup> Less than one-half of 1 per cent.

TABLE 8.—PROPORTION OF FORCE EMPLOYED IN MANUFACTURING INDUSTRIES AND OF TIME WORKED BY EMPLOYEES IN MAY, 1929—Continued

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked—		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
			Full time	Part time		Full normal force	Part normal force	
<b>Paper and printing</b> .....	952	—	92	8	99	54	46	97
Paper and pulp.....	174	—	86	14	99	40	60	93
Paper boxes.....	158	—	77	23	97	28	72	86
Printing, book and job.....	286	—	97	3	100	47	53	97
Printing, newspapers.....	334	—	99	1	100	81	19	103
<b>Chemicals and allied products</b> .....	293	—	88	12	98	26	74	80
Chemicals.....	117	—	97	3	100	49	51	96
Fertilizers.....	134	—	76	24	97	5	95	50
Petroleum refining.....	42	—	100	—	100	26	74	82
<b>Stone, clay, and glass products</b> .....	728	1	87	12	99	35	64	88
Cement.....	97	1	96	3	100	26	73	78
Brick, tile, and terra cotta.....	427	2	86	12	99	33	66	86
Pottery.....	107	1	74	25	96	45	54	92
Glass.....	97	—	95	5	99	42	58	95
<b>Metal products, other than iron and steel</b> .....	196	—	87	13	99	46	54	98
Stamped and enameled ware.....	61	—	90	10	99	49	51	95
Brass, bronze, and copper products.....	135	—	86	14	98	44	56	100
<b>Tobacco products</b> .....	216	2	71	27	95	29	69	92
Chewing and smoking tobacco and snuff.....	26	4	69	27	95	31	65	81
Cigars and cigarettes.....	190	2	71	27	95	28	69	94
<b>Vehicles for land transportation</b> .....	1,052	—	87	13	99	31	69	102
Automobiles.....	176	—	95	5	101	51	49	116
Carriages and wagons.....	47	—	70	30	95	21	79	75
Car building and repairing, electric-railroad.....	347	—	86	14	99	37	63	90
Car building and repairing, steam-railroad.....	482	—	87	13	99	21	79	81
<b>Miscellaneous industries</b> .....	376	(1)	86	14	98	48	52	101
Agricultural implements.....	62	—	90	10	99	37	63	114
Electrical machinery, apparatus, and supplies.....	138	—	91	9	100	61	39	102
Pianos and organs.....	59	2	58	41	91	14	85	73
Rubber boots and shoes.....	10	—	70	30	97	20	80	83
Automobile tires.....	39	—	90	10	99	49	51	110
Shipbuilding.....	68	—	96	4	100	63	37	92
<b>All industries</b> .....	10,125	(1)	84	15	98	39	61	93

<sup>1</sup> Less than one-half of 1 per cent.

## 2. Employment in Coal Mining in May, 1929

**E**MPLOYMENT in coal mining—anthracite and bituminous coal combined—*decreased* 1.2 per cent in May, 1929, as compared with April, while pay-roll totals *increased* 6.8 per cent.

The 1,345 mines for which reports were received had 306,996 employees in May, whose combined earnings in one week were \$8,015,157.

### Anthracite

**E**MPLOYMENT in anthracite mines alone was 3 per cent greater in May, 1929, than in April, and pay-roll totals were 12.1 per cent higher.



The much greater gain in pay-roll totals than in employment in anthracite mines in May was due to the decided *decrease* in aggregate *broken time* in May as compared with April, in which month both market conditions and labor difficulties caused a considerable falling off in employees' earnings.

All anthracite mines reported are in Pennsylvania—the Middle Atlantic division. The details for May and April are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ANTHRACITE MINES IN APRIL AND MAY, 1929

Geographic division	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1929	May, 1929		April, 1929	May, 1929	
Middle Atlantic <sup>1</sup> .....	162	114,063	117,483	+3.0	\$3,097,110	\$3,471,584	+12.1

<sup>1</sup> See footnote 4, p. 185.

### Bituminous Coal

EMPLOYMENT in bituminous coal mines was 3.6 per cent lower in May, 1929, than in April, and pay-roll totals were 3 per cent higher. These figures are based upon reports from 1,183 mines, in which there were in May 189,513 employees whose combined earnings in one week were \$4,543,573.

There were decreases in employment in May in seven of the eight geographic divisions from which bituminous coal mining was reported, while only four of the eight divisions showed decreased pay-roll totals. Certain States in the Middle Atlantic, East North Central, West North Central, and South Atlantic divisions had greater demands in May, due to the development of the lake season, which largely increased their working time and resulted in very decided increases in employees' earnings.

The details for each geographic division are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL BITUMINOUS COAL MINES IN APRIL AND MAY, 1929

Geographic division <sup>1</sup>	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1929	May, 1929		April, 1929	May, 1929	
New England.....							
Middle Atlantic.....	360	62,817	60,804	-3.2	\$1,518,790	\$1,527,215	+0.6
East North Central.....	174	31,391	29,048	-7.5	663,614	714,846	+7.7
West North Central.....	55	4,681	4,378	-6.5	96,992	98,511	+1.6
South Atlantic.....	262	43,271	42,977	-0.7	925,007	1,019,226	+10.2
East South Central.....	220	41,914	40,778	-2.7	842,277	841,294	-0.1
West South Central.....	24	1,166	1,178	+1.0	22,694	21,837	-3.8
Mountain.....	78	10,017	8,961	-10.5	290,946	278,315	-4.3
Pacific.....	10	1,418	1,389	-2.0	49,131	42,329	-13.8
All divisions.....	1,183	196,675	189,513	-3.6	4,409,451	4,543,573	+3.0

<sup>1</sup> See footnotes 3 to 11, p. 185.

### 3. Employment in Metalliferous Mining in May, 1929

**E**MPLOYMENT in metalliferous mining was 0.2 per cent greater in May, 1929, than in April, and pay-roll totals were less than one-tenth of 1 per cent higher. These percentages are based on returns from 339 mines, which in May had 59,404 employees whose combined earnings in one week were \$1,840,157.

Increases both in employment and in pay-roll totals were shown in two of the six geographic divisions represented in metalliferous mining—the West North Central and Mountain divisions.

The details for each geographic division are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL METALLIFEROUS MINES IN APRIL AND MAY, 1929

Geographic division <sup>1</sup>	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1929	May, 1929		April, 1929	May, 1929	
New England.....							
Middle Atlantic.....							
East North Central.....	41	11,313	11,156	-1.4	\$306,190	\$301,954	-1.4
West North Central.....	58	7,658	8,159	+6.5	230,490	248,306	+7.7
South Atlantic.....							
East South Central.....	13	4,428	4,280	-3.3	92,817	87,237	-6.0
West South Central.....	70	5,465	4,751	-13.1	136,840	119,039	-13.0
Mountain.....	135	28,703	29,489	+2.7	1,619,459	1,636,764	+1.7
Pacific.....	22	1,700	1,569	-7.7	54,037	46,857	-13.3
<b>All divisions.....</b>	<b>339</b>	<b>59,267</b>	<b>59,404</b>	<b>+0.2</b>	<b>1,839,833</b>	<b>1,840,157</b>	<b>+(.2)</b>

<sup>1</sup> See footnotes 3 to 11, p. 185.

<sup>2</sup> Less than one-tenth of 1 per cent.

### 4. Employment in Public Utilities in May, 1929

**E**MPLOYMENT in public utilities increased 2.6 per cent in May, 1929, as compared with April, and pay-roll totals increased 2 per cent.

Each of the nine geographic divisions showed substantial gains in employment in May, and eight of the divisions showed substantial gains in employees' earnings; the South Atlantic division, with a gain of 1.6 per cent in employment, showed a drop of 0.1 per cent in pay-roll totals.

Reports were made by 9,189 establishments having in May 702,258 employees whose combined earnings in one week were \$20,768,351.

The establishments reporting include electric railway, electric power and light, motor bus, gas, water, telephone, and telegraph companies.

Details for each geographic division are shown in the table following:

## COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL PUBLIC UTILITIES ESTABLISHMENTS IN APRIL AND MAY, 1929

Geographic division <sup>1</sup>	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1929	May, 1929		April, 1929	May, 1929	
New England.....	347	36,593	37,616	+2.8	\$1,193,137	\$1,220,726	+2.3
Middle Atlantic.....	1,482	200,820	206,795	+3.0	6,302,078	6,442,435	+2.2
East North Central.....	1,615	173,404	177,991	+2.6	5,422,040	5,590,941	+3.1
West North Central.....	1,495	70,975	73,141	+3.1	1,920,094	1,944,828	+1.3
South Atlantic.....	828	55,271	56,147	+1.6	1,548,906	1,547,576	-0.1
East South Central.....	664	22,493	22,889	+1.8	524,069	530,231	+1.2
West South Central.....	1,033	41,548	42,399	+2.0	1,004,982	1,015,797	+1.1
Mountain.....	565	17,236	17,824	+3.4	439,787	455,439	+3.6
Pacific.....	1,160	66,310	67,456	+1.7	1,998,537	2,020,378	+1.1
<b>All divisions.....</b>	<b>9,189</b>	<b>684,650</b>	<b>702,258</b>	<b>+2.6</b>	<b>20,353,570</b>	<b>20,768,351</b>	<b>+2.0</b>

<sup>1</sup> See footnotes 3 to 11, p. 185.

## 5. Employment in Wholesale and Retail Trade in May, 1929

EMPLOYMENT in 5,520 establishments—wholesale and retail trade combined—increased 1.6 per cent in May, 1929, as compared with April, and pay-roll totals increased 1.2 per cent. These establishments in May had 207,032 employees with total pay rolls in one week of \$5,157,520.

The establishments reporting are so carefully selected, from every State and from nearly every class of wholesale and retail trade, as to be reasonably representative of general conditions in each geographic division, and consequently in the United States as a whole.

## Wholesale Trade

EMPLOYMENT in wholesale trade in May was 1.1 per cent greater than in April, and pay-roll totals were 1.2 per cent greater, as shown by reports from 1,246 establishments having in May 43,202 employees whose combined earnings in one week were \$1,295,898.

The details by geographic divisions are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL WHOLESALE TRADE ESTABLISHMENTS IN APRIL AND MAY, 1929

Geographic division <sup>1</sup>	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1929	May, 1929		April, 1929	May, 1929	
New England.....	92	2,528	2,534	+0.2	\$72,978	\$73,557	+0.8
Middle Atlantic.....	245	8,858	9,111	+2.9	279,735	288,136	+3.0
East North Central.....	155	7,692	7,916	+2.9	232,653	241,042	+3.6
West North Central.....	152	8,259	8,188	-0.9	234,808	231,469	-1.4
South Atlantic.....	215	3,510	3,470	-1.1	100,266	98,658	-1.5
East South Central.....	44	1,510	1,533	+1.5	44,264	43,781	-1.1
West South Central.....	110	4,122	4,112	-0.2	117,834	117,527	-0.3
Mountain.....	38	705	706	+0.1	23,460	23,928	+2.0
Pacific.....	195	5,546	5,632	+1.6	175,141	177,770	+1.5
<b>All divisions.....</b>	<b>1,246</b>	<b>42,730</b>	<b>43,202</b>	<b>+1.1</b>	<b>1,281,079</b>	<b>1,295,898</b>	<b>+1.2</b>

<sup>1</sup> See footnotes 3 to 11, p. 185.



## Retail Trade

EMPLOYMENT and pay-roll totals in retail trade increased 1.8 per cent and 1.2 per cent, respectively, in May, 1929, as compared with April, as shown by returns from 4,274 establishments which in April had 163,830 employees whose combined earnings in one week were \$3,861,622.

Six of the nine geographic divisions reported substantial gains in employment and pay-roll totals in May as compared with April; the New England, South Atlantic, and West South Central States reported slightly lower employment in May as compared with April.

Details for each geographic division are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL RETAIL TRADE ESTABLISHMENTS IN APRIL AND MAY, 1929

Geographic division <sup>1</sup>	Estab-lish-ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1929	May, 1929		April, 1929	May, 1929	
New England.....	55	9,400	9,341	-0.6	\$224,998	\$225,717	+0.3
Middle Atlantic.....	262	36,076	36,607	+1.5	894,769	903,913	+1.0
East North Central.....	1,809	47,764	48,844	+2.3	1,238,945	1,249,091	+0.8
West North Central.....	477	10,896	11,146	+2.3	234,534	239,389	+2.1
South Atlantic.....	553	17,589	17,534	-0.3	372,421	366,144	-1.7
East South Central.....	344	4,518	4,655	+3.0	91,290	91,754	+0.5
West South Central.....	80	5,773	5,700	-1.3	111,397	110,821	-0.5
Mountain.....	61	1,970	2,003	+1.7	38,066	38,444	+1.0
Pacific.....	633	27,005	28,000	+3.7	610,458	636,349	+4.2
<b>All divisions.....</b>	<b>4,274</b>	<b>160,991</b>	<b>163,830</b>	<b>+1.8</b>	<b>3,816,872</b>	<b>3,861,622</b>	<b>+1.2</b>

<sup>1</sup> See footnotes 3 to 11, p. 185.

## 6. Employment in Hotels in May, 1929

EMPLOYMENT in hotels was 1.6 per cent lower in May, 1929, than in April, and pay-roll totals were 1.7 per cent lower, as shown by reports from 1,800 hotels having in May 143,998 employees and total pay rolls of \$2,451,222.

The New England geographic division reported a fair increase in employment in May, due chiefly to preparation for the opening of summer hotels, and the Mountain division also reported a slight increase in number of employees.

Per capita earnings, obtained by dividing the total number of employees into the total amount of pay roll, should not be interpreted as being the entire earnings of hotel employees. The pay-roll totals here reported are cash payments only, with no regard to the value of board or room furnished employees, and of course no satisfactory estimate can be made of additional recompense in the way of tips. The additions to the money wages granted vary greatly, not only among localities but among hotels in one locality and among employees in one hotel. Some employees are furnished board and room, others are given board only for one, two, or three meals, while the division of tips is made in many ways.

Per capita earnings are further reduced by the considerable amount of part-time employment in hotels caused by conventions and banquets or other functions.

The details for each geographic division are shown in the table following:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL HOTELS  
IN APRIL AND MAY, 1929

Geographic divisions <sup>1</sup>	Hotels	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1929	May, 1929		April, 1929	May, 1929	
New England.....	129	8,323	8,536	+2.6	\$139,202	\$141,727	+1.8
Middle Atlantic.....	337	43,624	42,918	-1.6	791,274	773,644	-2.2
East North Central.....	344	32,115	32,079	-0.1	566,992	569,115	+0.4
West North Central.....	209	13,140	12,945	-1.5	189,351	189,350	-(?)
South Atlantic.....	182	13,379	12,812	-4.2	214,815	193,049	-10.1
East South Central.....	71	5,545	5,343	-3.6	70,944	66,197	-6.7
West South Central.....	117	9,243	8,946	-3.2	124,396	125,397	+0.8
Mountain.....	86	3,294	3,333	+1.2	56,119	57,776	+3.0
Pacific.....	325	17,740	17,086	-3.7	339,407	334,967	-1.3
<b>All divisions.....</b>	<b>1,800</b>	<b>146,403</b>	<b>143,998</b>	<b>-1.6</b>	<b>2,492,560</b>	<b>2,451,222</b>	<b>-1.7</b>

<sup>1</sup> See footnotes 3 to 11, p. 185.

<sup>2</sup> Less than one-tenth of 1 per cent.

## 7. Employment in Canning and Preserving in May, 1929

ESTABLISHMENTS engaged in canning and preserving were canvassed for the first time in April and May, 1929, with the results presented in the table following.

Reports for the two months were received from 280 firms having in May 23,052 employees, whose combined earnings in one week were \$491,273. Employment in these plants fell off 31.6 per cent in May as compared with April, and pay-roll totals decreased 28 per cent. Probably no industrial group has wider variations in employment than this one, as will be shown by the fluctuations in the several geographic divisions, each division containing highly specialized classes of product. Significant conclusions can not be drawn from a single monthly comparison, however, and each division will be built up from month to month until a completely fair fluctuation can be shown in each monthly report.

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL CANNING  
AND PRESERVING ESTABLISHMENTS IN APRIL AND MAY, 1929

Geographic division <sup>1</sup>	Estab-lish-ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		April, 1929	May, 1929		April, 1929	May, 1929	
New England.....	30	1,245	2,302	+84.9	27,140	32,622	+20.2
Middle Atlantic.....	32	6,896	6,374	-7.6	150,483	142,593	-5.2
East North Central.....	81	2,449	2,542	+3.8	45,448	49,738	+9.4
West North Central.....	24	522	531	+1.7	8,836	9,781	+10.7
South Atlantic.....	36	1,580	1,688	+6.8	14,215	16,040	+12.8
East South Central.....	3	116	40	-65.5	1,161	553	-52.4
West South Central.....							
Mountain.....	15	249	249	(?)	4,308	4,252	-1.3
Pacific.....	59	20,678	9,326	-54.9	430,557	235,694	-45.3
<b>All divisions.....</b>	<b>280</b>	<b>33,735</b>	<b>23,052</b>	<b>-31.6</b>	<b>682,148</b>	<b>491,273</b>	<b>-28.0</b>

<sup>1</sup> See footnotes 3 to 11, p. 185.

<sup>2</sup> No change.

### Employment on Steam Railroads in the United States

THE monthly trend of employment from January, 1923, to April, 1929, on Class I railroads—that is, all roads having operating revenues of \$1,000,000 or over—is shown by the index numbers published in Table 1. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the monthly average for 1926 as 100.

TABLE 1.—INDEX OF EMPLOYMENT ON CLASS I STEAM RAILROADS IN THE UNITED STATES, JANUARY, 1923, TO APRIL, 1929

(Monthly average, 1926=100)

Month	1923	1924	1925	1926	1927	1928	1929
January.....	98.3	96.9	95.6	95.8	95.5	89.3	88.2
February.....	98.6	97.0	95.4	96.0	95.3	89.0	88.9
March.....	100.5	97.4	95.2	96.7	95.8	89.9	90.1
April.....	102.0	98.9	96.6	98.9	97.4	91.7	92.2
May.....	105.0	99.2	97.8	100.2	99.4	94.5	-----
June.....	107.1	98.0	98.6	101.6	100.9	95.9	-----
July.....	108.2	98.1	99.4	102.9	101.0	95.6	-----
August.....	109.4	99.0	99.7	102.7	99.5	95.7	-----
September.....	107.8	99.7	99.9	102.8	99.1	95.3	-----
October.....	107.3	100.8	100.7	103.4	98.9	95.3	-----
November.....	105.2	99.0	99.1	101.2	95.7	92.9	-----
December.....	99.4	96.0	97.1	98.2	91.9	89.7	-----
Average.....	104.1	98.3	97.9	100.0	97.5	92.9	<sup>1</sup> 89.9

<sup>1</sup> Average for 4 months.

Table 2 shows the total number of employees on the 15th day each of April, 1928, and March and April, 1929, and pay-roll totals for the entire month of each month considered.

In these tabulations data for the occupational group reported as "executives, officials, and staff assistants" are omitted from the totals.

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES—APRIL, 1928, MARCH, 1929, AND APRIL, 1929

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	April, 1928	March, 1929	April, 1929	April, 1928	March, 1929	April, 1929
<b>Professional, clerical, and general</b>	<b>270,957</b>	<b>268,477</b>	<b>269,103</b>	<b>\$38,642,607</b>	<b>\$39,342,731</b>	<b>\$39,295,179</b>
Clerks.....	155,333	152,594	152,749	20,919,269	21,234,197	21,147,420
Stenographers and typists.....	24,659	24,659	24,722	3,159,343	3,221,819	3,231,662
<b>Maintenance of way and structures</b>	<b>388,649</b>	<b>351,634</b>	<b>399,061</b>	<b>35,806,397</b>	<b>33,952,114</b>	<b>38,016,573</b>
Laborers, extra gang and work train.....	58,557	43,316	61,833	4,431,312	3,320,509	4,796,494
Laborers, track and roadway section.....	203,898	184,531	208,296	14,572,784	13,626,471	15,565,154
<b>Maintenance of equipment and stores</b>	<b>461,876</b>	<b>459,989</b>	<b>457,320</b>	<b>59,936,116</b>	<b>64,877,976</b>	<b>64,132,669</b>
Carmen.....	99,220	99,545	99,203	14,557,102	16,066,720	15,958,813
Machinists.....	56,251	55,349	55,259	8,651,173	9,489,303	9,409,832
Skilled trades helpers.....	101,030	101,745	101,216	11,061,626	12,430,982	12,257,115
Laborers (shops, engine houses, power plants, and stores).....	38,159	38,172	37,374	3,557,449	3,730,662	3,562,090
Common laborers (shops, engine houses, power plants, and stores).....	52,303	52,780	52,413	4,159,328	4,442,618	4,392,217



TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES—APRIL, 1928, MARCH, 1929, AND APRIL, 1929—Continued

Occupation	Number of employees at middle of month			Total earnings		
	April, 1928	March, 1929	April, 1929	April, 1928	March, 1929	April, 1929
<b>Transportation, other than train, engine, and yard</b>	<b>195,574</b>	<b>195,019</b>	<b>195,244</b>	<b>\$24,092,852</b>	<b>\$24,962,285</b>	<b>\$24,613,030</b>
Station agents	29,941	29,419	29,361	4,634,438	4,731,117	4,672,475
Telegraphers, telephoners, and towermen	23,323	23,249	23,177	3,558,402	3,686,660	3,577,280
Truckers (stations, warehouses, and platforms)	33,707	34,386	34,324	3,135,312	3,389,768	3,344,843
Crossing and bridge flagmen and gatemen	21,314	20,648	20,675	1,632,047	1,593,214	1,589,072
<b>Transportation (yardmasters, switch tenders, and hostlers)</b>	<b>22,135</b>	<b>21,893</b>	<b>21,551</b>	<b>4,246,722</b>	<b>4,342,020</b>	<b>4,215,133</b>
<b>Transportation, train and engine</b>	<b>302,618</b>	<b>314,395</b>	<b>306,345</b>	<b>59,416,454</b>	<b>65,731,973</b>	<b>63,004,182</b>
Road conductors	34,436	35,208	34,695	7,945,209	8,677,496	8,401,262
Road brakemen and flagmen	68,601	69,633	67,960	11,437,460	12,436,387	12,044,369
Yard brakemen and yard helpers	50,269	53,517	51,785	8,747,575	9,816,445	9,292,692
Road engineers and motormen	40,840	41,828	40,898	10,668,619	11,703,920	11,278,029
Road firemen and helpers	41,745	42,488	41,601	7,887,595	8,625,002	8,265,434
<b>Total, all employees</b>	<b>1,641,809</b>	<b>1,611,407</b>	<b>1,648,624</b>	<b>222,141,148</b>	<b>233,209,099</b>	<b>233,276,766</b>

## Changes in Employment and Pay Rolls in Various States

THE following data as to changes in employment and pay rolls have been compiled from reports received from the various State labor offices:

## PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES

## Monthly period

State, and industry group	Per cent of change, March to April, 1929		State, and industry group	Per cent of change, April to May, 1929	
	Employment	Pay roll		Employment	Pay roll
<b>Illinois</b>			<b>Iowa</b>		
Stone, clay, and glass products	+7.7	+9.4	Food and kindred products	-0.03	-----
Metals, machinery, and conveyances	+1.9	+4.6	Textiles	-1.6	-----
Wood products	-3.5	-1.9	Iron and steel works	+8	-----
Furs and leather goods	-3	+4.4	Lumber products	-0.03	-----
Chemicals, oils, paints, etc.	+2.5	+3.9	Leather products	-6.0	-----
Printing and paper goods	-6	-1.8	Paper products, printing and publishing	+2.7	-----
Textiles	-7	+1.6	Patent medicines, chemicals, and compounds	-5.0	-----
Clothing and millinery	-3.4	-22.8	Stone and clay products	+2.6	-----
Food, beverages, and tobacco	-2.9	-1.0	Tobacco and cigars	-9	-----
Miscellaneous	.0	+3	Railway car shops	-6	-----
<b>All manufacturing industries</b>	<b>+7</b>	<b>+1.7</b>	Various industries	-1	-----
<b>Trade, wholesale and retail services</b>	<b>-3.3</b>	<b>-2.2</b>	<b>All industries</b>	<b>+2</b>	-----
<b>Public utilities</b>	<b>+1.8</b>	<b>+3.4</b>	<b>Maryland</b>		
<b>Coal mining</b>	<b>+1.1</b>	<b>+6.2</b>	Food products	-2.7	-3.3
<b>Building and contracting</b>	<b>-5.0</b>	<b>-25.2</b>	Textiles	+2.2	-2.8
<b>All industries</b>	<b>+9.6</b>	<b>+6.9</b>	Iron and steel, and their products	+1.2	+4
			Lumber and its products	.0	-1.4
			Leather and its products	+5.3	-5.9
			Rubber tires	+12.7	+17.6

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—  
Continued

## Monthly period—Continued

State, and industry group	Per cent of change, April to May, 1929		State, and industry group	Per cent of change, March to April, 1929	
	Employment	Pay roll		Employment	Pay roll
<b>Maryland—Continued</b>			<b>New Jersey</b>		
Paper and printing.....	-0.1	-0.2	Food and kindred products.....	-2.3	-2.6
Chemicals and allied products.....	-11.1	-11.5	Textiles and their products.....	+3	-8
Stone, clay, and glass products.....	-15.9	-18.4	Iron and steel and their products.....	+2.1	+1.6
Metal products, other than iron and steel.....	-1.5	-2.2	Lumber and its products.....	-1.6	-2.4
Tobacco products.....	-6.6	-7.2	Leather and its products.....	-1.1	-2.6
Machinery (not including transportation equipment).....	+1.1	+2.6	Tobacco products.....	-5	-2.9
Musical instruments.....	-7.8	-4.1	Paper and printing.....	+1.1	-1
Transportation equipment.....	-2	+5.0	Chemicals and allied products.....	+1.1	+6.1
Car building and repairing.....	+2.7	+6	Stone, clay, and glass products.....	-1	-2
Miscellaneous.....	-4.2	-10.4	Metal products other than iron and steel.....	+1	-2.0
All manufacturing.....	-21	-1.33	Vehicles for land transportation.....	-5.4	-3.2
Retail department stores.....	-7.5	-9.8	Miscellaneous.....	+3.0	+1.7
Wholesale establishments.....	.0	-1	All industries.....	+6	+6
Public utilities.....	+3.6	+4.4	<b>New York</b>		
Coal mines.....	-8.2	-8.1	Stone, clay, and glass.....	+4.4	+4.7
Hotels.....	+3.0	+1.1	Metals and machinery.....	+1.4	+1.6
Quarries.....	+13.7	+25.0	Wood manufactures.....	+8	-1.6
Employment—index numbers (1919-1923=100)			Furs, leather, and rubber goods.....	-1.8	+3
March, 1929      April, 1929			Chemicals, oils, paints, etc.....	+1.1	+9
<b>Massachusetts</b>			Paper.....	-5	-6
Boots and shoes.....	70.4	67.8	Printing and paper goods.....	-2	-1.4
Bread and other bakery products.....	106.7	99.3	Textiles.....	-7	+1
Cars and general shop construction and repairs, steam railroads.....	69.3	69.1	Clothing and millinery.....	-6.6	-15.9
Clothing, men's and women's.....	96.7	96.7	Food and tobacco.....	-1.8	-1.7
Confectionery.....	79.6	77.1	Water, light, and power.....	-3.3	-2.6
Cotton goods.....	59.5	59.3	All industries.....	-6	-1.4
Dyeing and finishing textiles.....	109.4	108.0	<b>Oklahoma</b>		
Electrical machinery, apparatus, and supplies.....	104.5	105.1	April to May, 1929		
Foundry and machine-shop products.....	70.8	70.9	Cottonseed-oil mills.....	-44.2	-35.8
Furniture.....	107.9	104.0	Food production:		
Hosiery and knit goods.....	68.5	69.0	Bakeries.....	.0	-9.6
Jewelry.....	101.4	100.5	Confections.....	-10.0	-6.7
Leather, tanned, curried, and finished.....	81.2	77.5	Creameries and dairies.....	.0	+8.7
Paper and wood pulp.....	94.1	94.7	Flour mills.....	-9	-2.7
Printing and publishing.....	108.5	108.4	Ice and ice cream.....	+21.4	+9
Rubber footwear.....	89.3	86.6	Meat and poultry.....	+4.2	+4
Rubber goods, tires, and tubes.....	84.9	84.8	Lead and zinc:		
Silk goods.....	101.2	98.5	Mines and mills.....	-7.4	-5.9
Textile machinery and parts.....	55.7	56.8	Smelters.....	-10.1	-10.6
Woolen and worsted goods.....	77.8	76.3	Metals and machinery:		
All industries.....	79.9	79.0	Auto repairs, etc.....	+1.9	+6.8
			Machine shops and foundries.....	+4.3	+8.9
			Tank construction and erection.....	-7.7	-15.8
			Oil industry:		
			Producing and gasoline manufacture.....	-6.2	-5.5
			Refineries.....	+3.6	+21.7
			Printing: Job work.....	+1.8	+3
			Public utilities:		
			Steam-railway shops.....	-1.0	+8
			Street railways.....	+9.3	+2.4
			Water, light, and power.....	+5.7	+5.9

## TREND OF EMPLOYMENT

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PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—  
Continued

Monthly period—Continued

State, and industry group	Per cent of change, April to May, 1929		State, and industry group	Per cent of change, March to April, 1929	
	Employment	Pay roll		Employment	Pay roll
<b>Oklahoma—Continued</b>			<b>Wisconsin</b>		
Stone, clay, and glass:			<b>Manual</b>		
Brick and tile.....	+3.9	+4.8	Logging.....	+22.4	+7.1
Cement and plaster.....	+12.5	-1.2	Mining.....	+4.0	-10.6
Crushed stone.....	-21.7	-8	Stone crushing and quarrying.....	+6.1	+14.1
Glass manufacture.....	+1.1	-9	Manufacturing:		
Textiles and cleaning:			Stone and allied industries.....	-8	+3.8
Textile manufacture.....	+3	-1.3	Metal.....	+1.2	+1.8
Laundries, etc.....	+2.4	+2.0	Wood.....	-2	-1.5
Woodworking:			Rubber.....	-9	-4.4
Sawmills.....	+2.6	+1.9	Leather.....	+2.2	-3
Millwork, etc.....	+2.6	+14.1	Paper.....	+2	+3.9
All industries.....	-3	+14.4	Textiles.....	+2.4	-4.4
	Index numbers (1923-1925=100)— employment		Foods.....	-2.3	+1
	April, 1929	May, 1929	Light and power.....	+4.1	+5.6
<b>Pennsylvania</b>			Printing and publishing.....	+4	+2
Metal products.....	89.4	92.2	Laundering, cleaning, and dyeing.....	+5.6	+4.9
Transportation equipment.....	89.2	87.1	Chemicals (including soap, glue, and ex- plosives).....	-4.7	-7
Textile products.....	102.0	99.5	All manufacturing.....	+7	+7
Foods and tobacco.....	94.3	92.9	Construction:		
Stone, clay, and glass products.....	81.1	83.8	Building.....	-3.2	+2.6
Lumber products.....	67.0	71.8	Highway.....	+26.9	+19.9
Chemical products.....	99.8	101.5	Railroad.....	+35.1	+16.1
Leather and rubber products.....	94.9	97.0	Marine dredging, sewer digging.....	+86.3	+124.3
Paper and printing.....	88.0	92.0	Communication:		
All industries.....	92.7	93.5	Steam railways.....	-5.3	-11.7
	Pay roll		Electric railways.....	+16.5	+2.6
	April, 1929	May, 1929	Express, telephone, and telegraph.....	+12.6	+8.2
Metal products.....	100.5	104.7	Wholesale trade.....	+1	-6
Transportation equipment.....	97.4	89.9	Hotels and restaurants.....	-2.1	
Textile products.....	111.3	109.9			
Foods and tobacco.....	94.0	98.1	<b>Nonmanual</b>		
Stone, clay, and glass products.....	81.8	86.6	Manufacturing, mines, and quarries.....	+5	+8
Lumber products.....	67.3	72.7	Construction.....	.0	+2.3
Chemical products.....	107.3	110.6	Communication.....	+1.3	+4.1
Leather and rubber products.....	98.7	101.4	Wholesale trade.....	+2	+7.2
Paper and printing.....	104.6	108.4	Retail trade—sales force only.....	+6.0	+7.8
All industries.....	100.9	102.3	Miscellaneous professional services.....	-5	-7.3
			Hotels and restaurants.....	+9	



PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—  
Continued

Yearly period

State, and industry group	Per cent of change, April, 1928, to April, 1929		State, and industry group	Employment—index numbers (1919- 1923=100)	
	Employ- ment	Pay roll		April, 1928	April, 1929
<b>California</b>			<b>Massachusetts—Contd.</b>		
Stone, clay, and glass prod- ucts.....	-7.3	-9.0	Foundry and machine-shop products.....	64.9	70.9
Metals, machinery, and con- veyances.....	+20.8	+20.9	Furniture.....	104.1	104.0
Wood manufactures.....	-6.7	-6.4	Hosiery and knit goods.....	83.2	69.0
Leather and rubber goods.....	+27.5	+31.5	Jewelry.....	97.7	100.5
Chemicals, oils, paints, etc.....	+25.8	+24.4	Leather, tanned, curried, and finished.....	84.7	77.5
Printing and paper goods.....	+3.1	+4.3	Paper and wood pulp.....	93.3	94.7
Textiles.....	+2.5	+3.7	Printing and publishing.....	105.0	108.4
Clothing, millinery, and laundering.....	+3.5	+7.9	Rubber footwear.....	99.0	86.6
Foods, beverages, and to- bacco.....	+8.2	+13.7	Rubber goods, tires, and tubes.....	87.9	84.8
Water, light, and power.....	-5.0	-9.1	Silk goods.....	112.1	98.5
Miscellaneous.....	+8.9	-1.1	Textile machinery and parts.....	50.4	56.8
All industries.....	+10.1	+13.6	Woolen and worsted goods.....	80.9	76.3
	Employment—index numbers (1922=100)		All industries.....	80.4	79.0
	April, 1928	April, 1929		Per cent of change, April, 1928, to April, 1929	
<b>Illinois</b>				Employ- ment	Pay roll
Stone, clay, and glass prod- ucts.....	119.7	118.4	<b>New York</b>		
Metals, machinery, and con- veyances.....	100.8	124.5	Stone, clay, and glass.....	+0.4	+3.4
Wood products.....	79.1	74.5	Metals and machinery.....	+15.0	+21.2
Furs and leather goods.....	106.6	110.5	Wood manufactures.....	-2.6	+7.8
Chemicals, oils, paints, etc.....	120.4	130.2	Furs, leather, and rubber goods.....	+4.9	+6.6
Printing and paper goods.....	110.0	110.6	Chemicals, oils, paints, etc.....	+2.3	+4.4
Textiles.....	106.0	96.4	Paper.....	+5.0	+6.9
Clothing and millinery.....	63.4	60.7	Printing and paper goods.....	+2.7	+6.3
Foods, beverages, and to- bacco.....	88.6	85.4	Textiles.....	+1.7	+5.4
All manufacturing in- dustries.....	91.2	101.0	Clothing and millinery.....	+2.7	+7.2
Trade, wholesale and retail.....	69.1	65.3	Food and tobacco.....	-3	+2.6
Public utilities.....	135.8	141.4	Water, light, and power.....	-4.7	-6.3
Coal mining.....	15.5	57.9	All industries.....	+6.5	+11.3
Building and contracting.....	106.8	103.8		May, 1928, to May, 1929	
All industries.....	95.0	104.6	<b>Oklahoma</b>		
	Employment—index numbers (1919- 1923=100)		Cottonseed-oil mills.....	-36.3	-26.7
	April, 1928	April, 1929	Food production:		
<b>Massachusetts</b>			Bakeries.....	-8.3	-15.9
Boots and shoes.....	68.5	67.8	Confections.....	-5.2	+2.2
Bread and other bakery products.....	97.9	99.3	Creameries and dairies.....	-10.7	+9.6
Cars and general shop con- struction and repairs, steam railroads.....	74.4	69.1	Flour mills.....	+15.5	+15.1
Clothing, men's and women's.....	93.7	96.7	Ice and ice cream.....	+49.4	+6.7
Confectionery.....	77.2	77.1	Meat and poultry.....	-1.6	-1.1
Cotton goods.....	64.4	59.3	Lead and zinc:		
Dyeing and finishing.....	100.6	108.0	Mines and mills.....	+43.5	+46.2
Electrical machinery, appa- ratus and supplies.....	100.1	105.1	Smelters.....	-6.2	-1
			Metals and machinery:		
			Auto repairs, etc.....	+99.0	+104.5
			Machine shops and foundries.....	+27.3	+42.7
			Tank construction and erection.....	-4.3	+43.7
			Oil industry:		
			Producing and gasoline manufacture.....	+48.3	+43.7
			Refineries.....	+20.9	+23.9
			Printing: Job work.....	+5.8	+11.1
			Public utilities:		
			Steam-railway shops.....	+2.4	+1.2
			Street railways.....	+29.5	+19.0
			Water, light, and power.....	+175.5	+193.1

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—  
Continued

Yearly period—Continued

State, and industry group	Per cent of change, May, 1928, to May, 1929		State, and industry group	Per cent of change, April, 1928, to April, 1929	
	Employ- ment	Pay roll		Employ- ment	Pay roll
<b>Oklahoma—Continued</b>			<b>Wisconsin</b>		
Stone, clay, and glass:			<i>Manual</i>		
Brick and tile	+65.5	+43.7	Logging	+31.7	-9.7
Cement and plaster	+4.9	-7	Mining	-3.5	-8.1
Crushed stone	+188.4	+213.9	Stone crushing and quar- rying	-39.1	-21.0
Glass manufacture	+12.2	+17.2	Manufacturing:		
Textiles and cleaning:			Stone and allied indus- tries	-41.5	-32.8
Textile manufacture	+17.0	+26.1	Metal	+14.7	+24.8
Laundries, etc.	+12.2	+11.0	Wood	+5.7	+2.7
Woodworking:			Rubber	+13.8	+18.3
Sawmills	+42.0	+33.1	Leather	+9.5	+10.1
Millwork, etc.	-1.0	+6	Paper	+1.7	+7.0
All industries	+30.6	+47.9	Textiles	-7.8	+1.7
	Index numbers (1923-1925=100)— employment		Foods	+7.5	+12.7
	May, 1928	May, 1929	Light and power	+12.5	+14.4
<b>Pennsylvania</b>			Printing and publishing	+8.5	+7.8
Metal products	80.0	92.2	Laundering, cleaning, and dyeing	+6.6	+8.8
Transportation equipment	72.6	87.1	Chemical (including soap, glue, and ex- plosives)	-17.8	-14.0
Textile products	95.2	99.5	All manufacturing	+8.1	+14.2
Foods and tobacco	96.9	92.9	Construction:		
Stone, clay, and glass prod- ucts	79.5	83.8	Building	+17.3	+41.3
Lumber products	68.3	71.8	Highway	+15.1	+6.3
Chemical products	97.0	101.5	Railroad	+5.3	+6.8
Leather and rubber products	98.2	97.0	Marine dredging, sewer digging	+17.6	+15.3
Paper and printing	91.6	92.0	Communication:		
All industries	85.0	93.5	Steam railways	+2.0	+5.5
	Pay roll		Electric railways	+6.6	-9
Metal products	84.5	104.7	Express, telephone, and telegraph	+12.2	+9.2
Transportation equipment	72.8	89.9	Wholesale trade	+5.8	+8.4
Textile products	99.6	109.9	Hotels and restaurants	+3.3	
Foods and tobacco	98.3	98.1	<i>Nonmanual</i>		
Stone, clay, and glass prod- ucts	89.5	86.6	Manufacturing, mines, and quarries	+3.2	+5.0
Lumber products	65.9	72.7	Construction	-2.6	+5
Chemical products	106.8	110.6	Communication	+12.5	+11.1
Leather and rubber products	100.8	101.4	Wholesale trade	+5.3	+5.1
Paper and printing	107.2	108.4	Retail trade—sales force only	-5.1	+7.2
All industries	87.2	102.3	Miscellaneous professional services	+4.4	+1.0
			Hotels and restaurants	-12.7	

## Unemployment Among Organized Building-Trades Workers in Massachusetts

THE amount of unemployment on May 1, 1929, among the membership of building-trades unions reporting to the Massachusetts Department of Labor and Industries was 21.5 per cent of the total, as compared with 27.9 per cent on April 1, 1929, and with 24.1 per cent on May 1, 1928, according to the monthly press release of that department. Hod carriers and building laborers had the most unemployment (28.8 per cent) and electrical workers and carpenters the least, the figures for the two latter occupations being 15.6 per cent and 19.1 per cent, respectively. The figures for the other occupations ranged from 19.7 to 26.6 per cent.

The following table shows the percentage of unemployment among organized building-trades workers in Massachusetts, by cause, from January 3, 1928, to May 1, 1929, as reported by the Massachusetts Department of Labor and Industries:

PER CENT OF ORGANIZED BUILDING-TRADES WORKERS UNEMPLOYED IN MASSACHUSETTS ON SPECIFIED DATES, BY CAUSE, JANUARY 3, 1928, TO MAY 1, 1929

Date	Cause of unemployment					
	Lack of work or materials	Strike or lockout	Sickness, accident, or old age	Unfavorable weather	Other reasons	All causes
1928						
Jan. 3.....	20.8	0.8	2.1	3.4	0.2	27.3
Feb. 1.....	27.4	.1	1.7	.2	(1)	29.4
Mar. 1.....	28.9	.2	1.7	3.4	(1)	34.1
Apr. 2.....	26.9	.2	1.7	.1	(1)	28.9
May 1.....	22.2	.2	1.4	.1	.2	24.1
June 1.....	16.9	4.0	1.6	.3	.1	22.9
July 2.....	12.8	.1	1.4	.2		14.6
Aug. 1.....	11.3	.2	1.5	.1	.1	13.2
Sept. 4.....	14.1	.1	1.6	(1)		15.8
Oct. 1.....	15.3	(1)	1.8	.1	(1)	17.2
Nov. 1.....	17.8	.1	1.9	.1	.2	20.1
Dec. 3.....	21.6	(1)	1.9	.2	(1)	23.7
1929						
Jan. 2.....	24.7	.2	2.5	.1		27.5
Feb. 1.....	31.1	.1	2.8	.3		34.3
Mar. 1.....	29.9	(1)	2.8	.2		32.9
Apr. 1.....	24.2	.9	2.7	.1		27.9
May 1.....	18.5	(1)	2.7	.3		21.5

<sup>1</sup> Less than one-tenth of 1 per cent.



# WHOLESALE AND RETAIL PRICES

## Retail Prices of Food in the United States

THE following tables are compiled from monthly reports of actual selling prices<sup>1</sup> received by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food May 15, 1928, April 15 and May 15, 1929, as well as the percentage changes in the year and in the month. For example, the retail price per pound of round steak was 40.4 cents on May 15, 1928; 43.4 cents on April 15, 1929; and 44.9 cents on May 15, 1929. These figures show increases of 11 per cent in the year and 3 per cent in the month.

The cost of various articles of food combined shows a decrease of 0.3 per cent May 15, 1929, as compared with May 15, 1928, and an increase of 1.1 per cent May 15, 1929, as compared with April 15, 1929.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE MAY 15, 1929, COMPARED WITH APRIL 15, 1929, AND MAY 15, 1928

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (—) May 15, 1929, compared with—	
		May 15, 1928	Apr. 15, 1929	May 15, 1929	May 15, 1928	Apr. 15, 1929
		<i>Cents</i>	<i>Cents</i>	<i>Cents</i>		
Sirloin steak.....	Pound.....	46.1	49.0	50.4	+9	+3
Round steak.....	do.....	40.4	43.4	44.9	+11	+3
Rib roast.....	do.....	34.1	36.4	37.2	+9	+2
Chuck roast.....	do.....	26.6	29.5	30.4	+14	+3
Plate beef.....	do.....	18.2	20.6	21.1	+16	+2
Pork chops.....	do.....	35.4	37.2	37.7	+6	+1
Bacon, sliced.....	do.....	43.1	43.3	43.5	+1	+0.4
Ham, sliced.....	do.....	51.2	54.7	55.1	+8	+1
Lamb.....	do.....	41.5	41.8	42.1	+1	+1
Hens.....	do.....	37.7	41.8	42.2	+12	+1
Salmon, canned.....	do.....	35.4	31.4	31.3	-12	-0.3
Milk, fresh.....	Quart.....	14.1	14.2	14.2	+1	0
Milk, evaporated.....	16-oz. can.....	11.1	11.1	10.9	-2	-2
Butter.....	Pound.....	54.6	55.7	54.5	-0.2	-2
Oleomargarine (all butter substitutes).....	do.....	27.3	27.4	27.3	0	-0.4
Cheese.....	do.....	38.1	38.1	38.0	-0.3	-0.3
Lard.....	do.....	18.1	18.5	18.4	+2	-1
Vegetable lard substitute.....	do.....	24.8	24.8	24.9	+0.4	+0.4
Eggs, strictly fresh.....	Dozen.....	37.5	36.7	38.8	+3	+6
Bread.....	Pound.....	9.1	9.0	9.0	-1	0

<sup>1</sup> In addition to monthly retail prices of food and coal, the bureau publishes the prices of gas and electricity from each of 51 cities for the dates for which these data are secured.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE MAY 15, 1929, COMPARED WITH APRIL 15, 1929, AND MAY 15, 1928—Continued

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (–) May 15, 1929, compared with—	
		May 15, 1928	Apr. 15, 1929	May 15, 1929	May 15, 1928	Apr. 15, 1929
		<i>Cents</i>	<i>Cents</i>	<i>Cents</i>		
Flour.....	Pound.....	5.6	5.1	5.0	–11	–2
Corn meal.....	do.....	5.3	5.3	5.3	0	0
Rolled oats.....	do.....	8.9	8.9	8.9	0	0
Corn flakes.....	8-oz. package.....	9.5	9.5	9.5	0	0
Wheat cereal.....	28-oz. package.....	25.6	25.5	25.5	–0.4	0
Macaroni.....	Pound.....	19.9	19.6	19.7	–1	+1
Rice.....	do.....	10.0	9.8	9.7	–3	–1
Beans, navy.....	do.....	12.0	14.2	14.2	+18	0
Potatoes.....	do.....	3.3	2.3	2.7	–18	+17
Onions.....	do.....	7.6	8.2	7.4	–3	–10
Cabbage.....	do.....	8.2	5.2	5.2	–3.7	0
Beans, baked.....	No. 2 can.....	11.4	11.9	11.9	+4	0
Corn, canned.....	do.....	15.9	15.8	15.9	0	+1
Peas, canned.....	do.....	16.8	16.7	16.7	–1	0
Tomatoes, canned.....	do.....	11.6	13.1	13.2	+14	+1
Sugar.....	Pound.....	7.2	6.4	6.4	–11	0
Tea.....	do.....	77.2	77.5	77.5	+0.4	0
Coffee.....	do.....	49.0	49.6	49.5	+1	–0.2
Prunes.....	do.....	13.6	14.3	14.4	+6	+1
Raisins.....	do.....	13.6	11.5	11.6	–15	+1
Bananas.....	Dozen.....	32.7	31.8	31.8	–3	0
Oranges.....	do.....	61.9	39.8	41.4	–3.3	+4
Weighted food index.....					–0.3	+1.1

Table 2 shows for the United States average retail prices of specified food articles on May 15, 1913, and on May 15 of each year from 1923 to 1929, together with percentage changes in May of each of these specified years, compared with May, 1913. For example, the retail price per pound of flour was 3.3 cents in May, 1913; 4.8 cents in May, 1923; 4.6 cents in May, 1924; 6.1 cents in May, 1925, and May, 1926; 5.5 cents in May, 1927; 5.6 cents in May, 1928; and 5.0 cents in May, 1929.

As compared with May, 1913, these figures show increases of 45 per cent in May, 1923; 39 per cent in May, 1924; 85 per cent in May, 1925, and May, 1926; 67 per cent in May, 1927; 70 per cent in May, 1928; and 52 per cent in May, 1929.

The cost of the various articles of food combined showed an increase of 58.6 per cent in May, 1929, as compared with May, 1913.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE MAY 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH MAY 15, 1913

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Average retail price on May 15—								Per cent of increase May 15 of each specified year compared with May 15, 1913							
	1913	1923	1924	1925	1926	1927	1928	1929	1923	1924	1925	1926	1927	1928	1929	
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.								
Sirloin steak.....pound..	25.6	38.7	40.6	40.8	41.5	42.3	46.1	50.4	51	59	59	62	65	80	97	
Round steak.....do.....	22.2	33.0	34.6	35.0	35.8	36.9	40.4	44.9	49	56	58	61	66	82	102	
Rib roast.....do.....	20.0	28.2	29.4	29.8	30.4	31.2	34.1	37.2	41	47	49	52	56	71	86	
Chuck roast.....do.....	16.1	19.9	21.3	22.1	22.5	23.5	26.6	30.4	24	32	37	40	46	65	89	
Plate beef.....do.....	12.2	12.7	13.4	14.0	14.6	15.2	18.2	21.1	4	10	15	20	25	49	73	
Pork chops.....do.....	20.9	30.0	29.9	36.0	40.3	36.4	35.4	37.7	44	43	72	93	74	69	80	
Bacon, sliced.....do.....	26.9	39.1	36.1	46.4	49.3	47.6	43.1	43.5	45	34	72	83	77	60	62	
Ham, sliced.....do.....	26.7	45.3	44.7	53.0	55.9	56.3	51.2	55.1	70	67	99	109	111	92	106	
Lamb, leg of.....do.....	19.4	36.7	39.4	38.6	39.9	41.0	41.5	42.1	89	103	99	106	111	114	117	
Hens.....do.....	22.2	36.2	36.6	37.9	41.0	38.4	37.7	42.2	63	65	71	85	73	70	90	
Salmon, canned, red.....pound..		31.2	31.1	31.2	37.9	32.5	35.4	31.3								
Milk, fresh.....quart..	8.8	13.5	13.6	13.7	13.9	13.9	14.1	14.2	53	55	56	58	58	60	61	
Milk, evaporated.....16-ounce can..		12.2	11.7	11.2	11.5	11.5	11.1	10.9								
Butter.....pound..	35.9	52.1	46.1	51.9	50.0	53.4	54.6	54.5	45	28	45	39	49	52	52	
Oleomargarine (all butter substitutes).....pound..		28.3	29.2	30.0	30.2	28.4	27.3	27.3								
Cheese.....do.....	21.9	35.5	34.6	36.3	36.0	37.0	38.1	38.0	62	58	66	64	69	74	74	
Lard.....do.....	15.8	17.3	17.1	22.6	21.5	19.0	18.1	18.4	9	8	43	36	20	15	16	
Vegetable lard substitute.....pound..		22.6	24.5	25.7	25.6	25.0	24.8	24.9								
Eggs, strictly fresh.....dozen..	26.3	35.1	32.8	39.3	38.9	33.6	37.5	38.8	33	25	49	48	28	43	48	
Bread.....pound..	5.6	8.7	8.7	9.4	9.4	9.4	9.1	9.1	55	55	68	68	68	63	63	
Flour.....do.....	3.3	4.8	4.6	6.1	6.1	5.5	5.6	5.0	45	39	85	85	67	70	52	
Corn meal.....do.....	2.9	4.0	4.4	5.4	5.1	5.1	5.3	5.3	38	52	86	76	76	83	83	
Rollod oats.....do.....		8.8	8.8	9.3	9.1	9.0	8.9	8.9								
Corn flakes.....do.....																
8-ounce package.....do.....		9.7	9.7	11.0	11.0	10.1	9.5	9.5								
Wheat cereal.....do.....																
28-ounce package.....do.....		24.5	24.3	24.6	25.4	25.5	25.6	25.5								
Macaroni.....pound..	19.7	19.5	20.5	20.3	20.0	19.9	19.9	19.7								
Rice.....do.....	8.6	9.4	9.9	11.0	11.7	10.6	10.0	9.7	9	15	28	36	23	16	13	
Beans, navy.....do.....		11.4	9.8	10.3	9.2	9.0	12.0	14.2								
Potatoes.....do.....	1.6	2.7	2.9	2.7	6.0	4.5	3.3	2.7	69	81	69	275	181	106	69	
Onions.....do.....		7.8	6.7	8.7	7.7	8.7	7.6	7.4								
Cabbage.....do.....		8.0	7.7	5.6	6.2	8.7	8.2	5.2								
Beans, baked.....do.....																
No. 2 can.....do.....		13.0	12.7	12.5	11.9	11.6	11.4	11.9								
Corn, canned.....do.....		15.4	15.8	18.1	16.5	15.6	15.9	15.9								
Peas, canned.....do.....		17.5	18.1	18.5	17.5	16.8	16.8	16.7								
Tomatoes, canned.....do.....																
No. 2 can.....do.....		13.0	13.0	13.8	11.9	12.1	11.6	13.2								
Sugar, granulated.....pound..	5.4	11.2	9.2	7.2	6.7	7.3	7.2	6.4	107	70	33	24	35	33	19	
Tea.....do.....	54.4	69.3	71.1	75.6	76.4	77.4	77.2	77.5	27	31	39	40	42	42	42	
Coffee.....do.....	29.8	38.0	42.2	52.2	51.0	48.2	49.0	49.5	28	42	75	71	62	64	66	
Prunes.....do.....		19.5	17.6	17.3	17.1	15.4	13.6	14.4								
Raisins.....do.....		17.8	15.5	14.5	14.7	14.3	13.6	11.6								
Bananas.....dozen..		37.0	36.6	37.3	35.4	33.9	32.7	31.8								
Oranges.....do.....		55.3	41.6	55.5	50.3	49.8	61.9	41.4								
All articles combined <sup>1</sup> .....									48.3	46.0	56.9	66.7	60.8	59.2	58.6	

<sup>1</sup> Beginning with January, 1921, the index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.



Table 3 shows the trend in the retail cost of three important groups of food commodities, viz, cereals, meats, and dairy products, by years, from 1913 to 1928, and by months for 1927, 1928, and 1929. The articles within these groups are as follows:

Cereals: Bread, flour, corn meal, rice, rolled oats, corn flakes, wheat cereal, and macaroni.

Meats: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, hens, and leg of lamb.

Dairy products: Butter, cheese, fresh milk, and evaporated milk.

TABLE 3.—INDEX NUMBERS OF RETAIL COST OF CEREALS, MEATS, AND DAIRY PRODUCTS FOR THE UNITED STATES, 1913 TO MAY, 1929

[Average cost in 1913=100.0]

Year and month	Cereals	Meats	Dairy products	Year and month	Cereals	Meats	Dairy products
1913: Average for year....	100.0	100.0	100.0	1927: Average for year—			
1914: Average for year....	106.7	103.4	97.1	Continued.			
1915: Average for year....	121.6	99.6	96.1	November.....	169.8	169.9	150.2
1916: Average for year....	126.8	108.2	103.2	December.....	168.6	168.1	152.8
1917: Average for year....	186.5	137.0	127.6	1928: Average for year....	167.2	179.2	150.0
1918: Average for year....	194.3	172.8	153.4	January.....	168.0	168.3	152.2
1919: Average for year....	198.0	184.2	176.6	February.....	168.0	167.8	150.7
1920: Average for year....	232.1	185.7	185.1	March.....	166.8	167.1	150.7
1921: Average for year....	179.8	158.1	149.5	April.....	167.2	170.3	147.8
1922: Average for year....	159.3	150.3	135.9	May.....	168.3	175.4	147.3
1923: Average for year....	156.9	149.0	147.6	June.....	169.8	177.7	146.1
1924: Average for year....	160.4	150.2	142.8	July.....	169.3	184.4	147.1
1925: Average for year....	176.2	163.0	147.1	August.....	168.2	189.5	148.3
1926: Average for year....	175.5	171.3	145.5	September.....	166.7	195.8	151.2
1927: Average for year....	170.7	169.9	148.7	October.....	165.9	188.9	151.1
January.....	172.8	168.1	151.4	November.....	165.3	184.9	152.5
February.....	172.7	167.6	151.8	December.....	164.2	179.1	153.5
March.....	172.1	168.5	152.2	1929:			
April.....	171.7	170.6	150.8	January.....	164.1	180.9	151.9
May.....	171.6	170.7	145.3	February.....	164.1	180.3	152.6
June.....	170.7	168.3	143.7	March.....	164.1	182.8	152.4
July.....	170.6	169.3	143.9	April.....	164.1	187.5	148.9
August.....	171.2	171.0	144.5	May.....	163.5	191.2	147.5
September.....	170.6	173.0	146.6				
October.....	170.5	173.7	149.4				

#### Index Numbers of Retail Prices of Food in the United States

IN TABLE 4 index numbers are given which show the changes in the retail prices of specified food articles, by years, for 1913 and 1920 to 1928,<sup>2</sup> and by months for 1928 through May, 1929. These index numbers, or relative prices, are based on the year 1913 as 100 and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of sirloin steak for the year 1928 was 188.2, which means that the average money price for the year 1928 was 88.2 per cent higher than the average money price for the year 1913. As compared with the relative price, 167.7 in 1927, the figures for 1928 show an increase of 20½ points, but an increase of 12.2 per cent in the year.

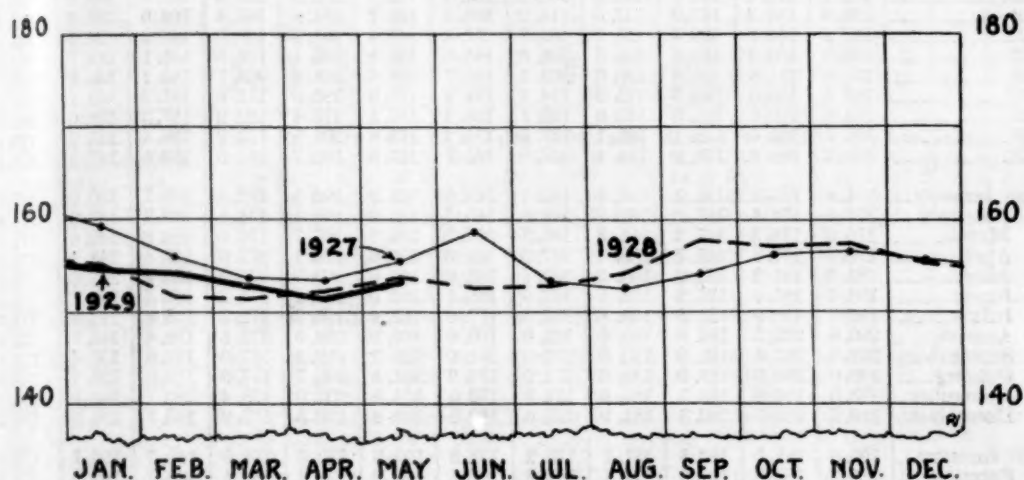
In the last column of Table 4 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the

<sup>2</sup> For index numbers of each month, January, 1913, to December, 1927, see Bulletin No. 396, pp. 44 to 61; Bulletin No. 418, pp. 38 to 51; Bulletin No. 445, pp. 36 to 49, and Bulletin No. 464, pp. 36 to 49.

average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March, 1921, issue, p. 25.) Although previous to January, 1921, the number of food articles has varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index

## TREND OF RETAIL PRICES OF FOOD

[1913=100]



numbers based on the average for the year 1913 as 100 are 151.6 for April, 1929, and 153.3 for May, 1929.

The curve shown in the accompanying chart pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

TABLE 4.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920 TO 1928, AND BY MONTHS FOR JANUARY, 1928, THROUGH MAY, 1929

[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Hens	Milk	Butter	Cheese
1913.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920.....	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	209.9	187.6	183.0	188.2
1921.....	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	186.4	164.0	135.0	153.9
1922.....	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	125.1	148.9
1923.....	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	164.3	155.1	144.7	167.0
1924.....	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	165.7	155.1	135.0	159.7
1925.....	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	157.3	143.1	166.1
1926.....	162.6	159.6	153.0	140.6	120.7	188.1	186.3	213.4	182.2	157.3	138.6	165.6
1927.....	167.7	166.4	158.1	148.1	127.3	175.2	174.8	204.5	173.2	158.4	145.2	170.1
1928.....	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	175.6	159.6	147.5	174.2
1928: January.....	174.8	173.1	165.2	158.8	142.1	149.0	165.2	192.2	172.8	160.7	150.9	177.4
February.....	176.4	174.4	167.2	160.6	144.6	140.5	161.9	190.3	174.6	160.7	147.0	177.4
March.....	176.8	175.3	167.2	161.3	146.3	136.2	159.3	187.7	174.6	159.6	149.6	174.2
April.....	178.3	177.6	168.7	163.1	147.9	149.0	158.9	188.1	177.0	158.4	143.9	172.9
May.....	181.5	181.2	172.2	166.3	150.4	168.6	159.6	190.3	177.0	158.4	142.6	172.4
June.....	186.6	186.5	175.3	172.5	152.9	165.7	160.0	192.2	174.2	157.3	140.7	172.4
July.....	195.7	196.9	181.8	180.6	157.9	177.6	162.6	198.5	172.3	158.4	141.8	173.3
August.....	200.8	202.2	184.8	185.0	162.0	190.0	165.9	204.5	172.8	158.4	144.7	173.8
September.....	203.9	205.4	188.9	190.0	170.2	211.0	168.1	208.2	177.9	159.6	150.4	175.1
October.....	198.0	200.0	185.9	188.8	171.9	179.0	167.8	206.7	177.9	159.6	150.1	175.6
November.....	193.3	194.6	183.3	185.6	171.9	170.0	164.8	203.0	178.4	160.7	152.2	174.2
December.....	189.8	191.5	180.3	181.9	168.6	149.0	160.4	198.5	177.9	160.7	154.8	174.2
1929: January.....	190.6	191.0	180.8	181.3	170.2	153.8	159.3	200.0	184.0	160.7	150.7	173.8
February.....	188.2	188.8	178.8	179.4	167.8	157.1	152.2	199.6	186.4	160.7	152.7	172.9
March.....	188.6	189.2	179.3	180.0	167.8	167.6	158.9	201.9	190.1	160.7	152.2	172.9
April.....	192.9	194.6	183.8	184.4	170.2	177.1	160.4	203.3	196.2	159.6	145.4	172.4
May.....	198.4	201.3	187.9	190.0	174.4	179.5	161.1	204.8	198.1	159.6	142.3	171.9

Year and month	Lard	Eggs	Bread	Flour	Corn meal	Rice	Potatoes	Sugar	Tea	Coffee	All articles <sup>1</sup>
1913.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920.....	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1921.....	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	153.3
1922.....	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6
1923.....	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	126.5	146.2
1924.....	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925.....	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1926.....	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	160.6
1927.....	122.2	131.0	166.1	166.7	173.3	123.0	223.5	132.7	142.5	162.1	155.4
1928.....	117.7	134.5	162.5	163.6	176.7	114.9	158.8	129.1	142.3	165.1	154.3
1928: January.....	119.6	162.0	164.3	160.6	173.3	117.2	176.5	129.1	142.3	162.8	155.1
February.....	115.8	124.9	164.3	160.6	173.3	117.2	176.5	129.1	142.1	163.1	151.6
March.....	112.7	107.2	162.5	160.6	173.3	116.1	200.0	129.1	142.3	163.8	151.4
April.....	112.7	103.8	162.5	163.6	176.7	114.9	205.9	129.1	141.9	164.1	152.1
May.....	114.6	108.7	162.5	169.7	176.7	114.9	194.1	130.9	141.9	164.4	153.8
June.....	115.2	112.5	164.3	172.7	176.7	113.8	170.6	132.7	142.1	165.1	152.6
July.....	116.5	120.6	164.3	169.7	176.7	114.9	135.3	132.7	142.3	165.1	152.8
August.....	118.4	130.4	164.3	163.6	176.7	113.8	129.4	129.1	142.3	165.8	154.2
September.....	122.2	146.1	162.5	160.6	176.7	114.9	129.4	127.3	142.3	166.1	157.8
October.....	123.4	157.4	162.5	157.6	176.7	113.8	129.4	125.5	142.5	166.4	156.8
November.....	120.9	171.9	162.5	154.5	176.7	112.6	129.4	123.6	142.3	166.8	157.3
December.....	118.4	169.3	160.7	154.5	176.7	113.8	129.4	121.8	142.1	166.8	155.8
1929: January.....	117.1	146.7	160.7	154.5	176.7	112.6	135.3	121.8	142.5	166.1	154.6
February.....	116.5	142.3	160.7	154.5	176.7	112.6	135.3	120.0	142.6	166.1	154.4
March.....	116.5	122.0	160.7	154.5	176.7	112.6	135.3	118.2	142.6	166.4	153.0
April.....	117.1	106.4	160.7	154.5	176.7	112.6	135.3	116.4	142.5	166.4	151.6
May.....	116.5	112.5	160.7	151.5	176.7	111.5	158.8	116.4	142.5	166.1	153.3

<sup>1</sup> 22 articles in 1913-1920; 43 articles in 1921-1929.



TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, MAY 15, 1923, AND APRIL 15 AND MAY 15, 1929

[Exact comparisons of prices in different cities can not be made for some articles, particularly meats and vegetables, owing to differences in trade practices]

Article	Atlanta, Ga.			Baltimore, Md.			Birmingham, Ala.			Boston, Mass.			Bridgeport, Conn.		
	May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929	
		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15
Sirloin steak.....pound..	44.3	49.3	50.7	43.2	46.6	49.2	46.3	49.7	52.5	72.1	73.8	74.5	53.5	56.5	56.4
Round steak.....do.....	40.6	44.3	46.0	39.8	43.0	45.3	39.5	42.2	44.5	56.5	57.1	59.1	47.5	51.0	52.1
Rib roast.....do.....	35.1	36.1	36.2	33.7	34.9	35.8	32.5	35.4	36.1	42.4	43.3	44.0	41.1	42.3	42.5
Chuck roast.....do.....	28.2	29.9	30.9	25.5	29.6	29.7	25.9	29.2	29.5	31.5	34.5	34.8	31.8	34.2	35.3
Plate beef.....do.....	18.4	18.8	20.5	18.5	20.0	20.5	17.4	19.0	20.9	22.4	22.4	22.7	13.8	16.0	16.2
Pork chops.....do.....	35.4	35.3	35.3	33.5	35.7	37.1	33.8	34.2	34.2	36.9	39.1	39.5	37.8	40.2	40.3
Bacon, sliced.....do.....	41.4	41.8	41.5	38.2	38.0	37.8	42.4	41.7	42.4	40.6	43.6	43.7	49.0	47.6	48.0
Ham, sliced.....do.....	50.4	56.0	56.3	51.6	55.1	56.3	51.1	52.8	53.2	55.4	59.1	59.5	54.2	57.7	57.7
Lamb, leg of.....do.....	42.5	42.3	43.1	40.7	41.5	40.9	45.0	44.1	43.7	42.3	41.1	41.2	42.4	41.2	42.8
Hens.....do.....	34.9	37.2	38.1	39.3	43.8	44.2	31.4	35.5	35.8	40.4	45.9	46.6	41.1	45.7	47.2
Salmon, canned, red.....pound..	36.3	34.7	34.0	33.6	27.5	28.0	37.0	32.6	32.9	34.2	30.3	30.8	34.1	29.4	30.3
Milk, fresh.....quart..	18.0	16.5	16.5	14.0	14.0	14.0	18.7	17.3	16.7	14.8	15.5	15.5	16.0	16.0	16.0
Milk, evaporated.....16-ounce can..	13.3	13.4	13.2	11.0	10.7	10.5	11.7	12.2	12.1	11.5	11.8	11.6	11.5	11.4	10.9
Butter.....pound..	56.8	58.8	57.4	59.3	59.9	58.3	57.6	59.0	57.0	57.0	58.5	57.5	56.2	57.5	56.3
Oleomargarine (all butter substitutes).....pound..	26.5	29.7	28.8	27.3	28.6	28.2	31.5	31.8	31.2	28.2	29.3	29.0	26.8	25.8	25.8
Cheese.....do.....	35.0	36.4	37.1	36.0	36.3	36.3	36.8	36.9	37.6	40.7	39.4	39.5	42.2	43.4	43.8
Lard.....do.....	17.5	18.2	18.0	16.4	16.5	16.4	18.2	17.9	18.1	18.2	17.9	18.2	17.4	17.5	17.5
Vegetable lard substitute.....pound..	21.8	23.1	22.8	22.8	23.3	23.3	19.7	21.2	21.4	25.0	25.5	25.5	25.5	25.4	25.7
Eggs, strictly fresh.....dozen..	35.3	34.6	37.1	36.1	34.4	37.6	35.4	35.5	36.2	51.8	48.9	51.2	47.2	46.2	47.5
Bread.....pound..	10.8	10.8	10.7	9.6	8.5	8.5	10.1	9.9	9.9	8.6	8.7	8.7	8.8	8.7	8.7
Flour.....do.....	6.8	6.5	6.5	5.2	4.7	4.7	6.8	6.5	6.4	6.0	5.4	5.4	5.6	5.1	5.0
Corn meal.....do.....	4.5	4.5	4.3	4.0	4.2	4.1	4.2	4.1	4.1	6.8	6.7	6.9	7.3	7.2	7.2
Rollod oats.....do.....	9.5	9.6	9.5	8.0	8.1	8.1	9.7	9.5	9.4	8.9	8.8	8.7	8.6	8.5	8.5
Corn flakes.....8-ounce package..	9.7	9.8	9.7	8.9	8.8	8.7	10.1	9.8	9.9	9.5	9.4	9.4	9.4	9.3	9.3
Wheat cereal.....28-ounce package..	26.6	27.0	27.6	24.4	24.6	24.2	27.3	27.3	27.2	25.0	25.1	25.3	24.8	24.2	24.6
Macaroni.....pound..	21.3	21.8	21.5	19.4	19.0	19.1	18.6	18.2	18.2	21.6	21.3	21.0	22.3	22.4	22.2
Rice.....do.....	8.9	9.4	9.4	9.2	8.7	9.2	9.5	8.9	8.9	11.0	10.4	10.5	10.5	10.2	10.2
Beans, navy.....do.....	13.0	16.0	16.4	11.7	13.7	13.8	12.0	14.8	15.1	11.3	13.8	13.5	11.3	14.5	14.3
Potatoes.....do.....	4.9	3.2	3.5	3.6	1.9	2.4	4.7	3.8	3.9	2.9	2.1	2.5	3.0	1.9	2.1
Onions.....do.....	9.3	9.4	8.7	8.3	8.5	7.3	9.1	9.0	8.5	8.0	8.4	8.2	8.2	7.6	7.3
Cabbage.....do.....	7.7	4.6	4.5	9.0	4.8	4.9	7.8	4.9	4.8	10.5	5.9	6.0	9.3	5.4	5.4
Beans, baked.....No. 2 can..	10.5	11.7	11.9	10.8	11.0	11.0	11.4	11.7	11.8	12.5	12.7	12.8	11.5	11.9	11.9
Corn canned.....do.....	17.6	17.9	17.9	14.8	16.4	16.8	17.1	16.8	16.8	17.4	17.3	17.2	19.1	18.2	18.2
Peas, canned.....do.....	19.0	18.2	18.5	14.7	15.4	15.3	19.6	19.6	19.9	19.3	20.1	19.9	21.5	19.7	19.2
Tomatoes, canned.....No. 2 can..	10.3	13.2	13.3	10.0	11.4	11.8	10.5	13.0	13.1	11.8	13.2	13.6	13.5	14.3	14.3
Sugar.....pound..	7.7	6.8	7.0	6.5	5.2	5.4	7.6	6.7	6.8	7.1	6.4	6.2	6.9	6.4	6.3
Tea.....do.....	106.3	105.6	105.3	71.0	72.6	72.8	100.3	95.6	96.2	72.4	76.4	76.3	61.0	57.2	57.2
Coffee.....do.....	48.7	52.7	52.1	44.6	45.4	45.3	50.2	51.5	52.0	53.4	53.8	54.4	47.3	47.5	47.9
Prunes.....do.....	14.7	16.0	15.6	11.4	12.2	12.4	15.9	16.8	16.7	12.5	13.7	14.1	13.4	15.2	15.4
Raisins.....do.....	15.0	13.5	13.5	12.5	10.4	10.4	14.8	12.8	12.6	12.5	10.7	10.7	13.7	12.5	12.3
Bananas.....dozen..	28.9	26.9	26.5	23.9	23.9	24.3	38.0	36.3	35.6	46.0	42.0	43.8	34.3	33.3	31.3
Oranges.....do.....	55.5	31.4	35.3	62.2	33.6	39.1	59.4	33.5	35.9	67.4	39.4	43.7	67.1	46.9	42.6

<sup>1</sup> The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, MAY 15, 1928, AND APRIL 15 AND MAY 15, 1929—Continued

Article	Buffalo, N. Y.			Butte, Mont.			Charleston, S. C.			Chicago, Ill.			Cincinnati, Ohio		
	May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929	
		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15
Sirloin steak.....pound.....	Cts. 44.7	Cts. 48.0	Cts. 49.3	Cts. 35.9	Cts. 36.4	Cts. 40.2	Cts. 38.5	Cts. 38.8	Cts. 39.2	Cts. 48.6	Cts. 51.9	Cts. 53.3	Cts. 42.0	Cts. 46.6	Cts. 47.9
Round steak.....do.....	38.0	41.4	42.9	33.9	34.8	38.2	36.3	37.7	38.5	38.8	43.9	45.5	38.7	43.5	44.9
Rib roast.....do.....	33.4	35.4	36.2	32.7	31.6	34.5	32.7	32.4	32.9	38.0	39.6	40.2	34.2	38.1	38.4
Chuck roast.....do.....	26.6	29.9	31.0	24.2	25.7	28.8	25.9	27.0	27.4	28.5	32.5	33.0	25.3	28.6	29.7
Plate beef.....do.....	17.1	19.5	20.2	16.4	17.7	19.7	18.4	20.7	21.3	17.8	20.3	20.4	19.9	22.3	23.5
Pork chops.....do.....	38.1	39.2	40.0	34.8	35.3	36.7	33.9	35.5	38.2	34.1	37.4	37.6	34.9	34.5	35.7
Bacon, sliced.....do.....	38.8	40.2	40.1	50.0	48.8	48.8	36.7	36.1	36.3	47.0	48.0	47.7	38.4	38.6	38.6
Ham, sliced.....do.....	49.0	53.3	53.7	54.6	54.2	54.6	45.3	47.8	47.1	52.0	54.0	53.9	49.8	53.6	55.0
Lamb, leg of.....do.....	37.4	38.4	38.0	38.7	42.4	43.1	44.3	46.6	46.6	40.5	42.6	42.3	42.3	44.1	43.9
Hens.....do.....	39.7	43.5	44.1	36.1	37.8	37.9	37.7	42.7	42.9	39.6	44.6	45.0	39.3	45.6	45.7
Salmon, canned, red pound.....	35.0	29.4	29.1	32.7	32.0	32.3	34.8	28.3	28.6	36.7	33.4	32.8	35.9	28.9	28.6
Milk, fresh.....quart.....	13.0	14.0	14.0	14.0	14.0	14.0	19.0	19.0	19.0	14.0	14.0	14.0	14.0	14.0	14.0
Milk, evaporated 16-ounce can.....	10.7	10.7	10.7	10.6	10.6	10.6	11.6	10.9	10.8	10.8	10.8	10.6	10.8	10.7	10.8
Butter.....pound.....	54.1	55.5	53.5	50.9	52.5	52.5	54.4	56.6	54.4	52.7	53.4	51.6	55.7	57.0	56.2
Oleomargarine (all butter substitutes).....pound.....	27.7	26.3	26.1	-----	-----	-----	28.6	29.0	28.9	26.6	26.6	26.6	27.6	28.3	28.0
Cheese.....do.....	38.9	39.1	39.3	37.7	36.5	37.6	34.8	34.6	34.2	42.9	42.1	42.0	39.2	39.2	38.9
Lard.....do.....	16.9	17.5	17.4	21.2	21.6	21.5	18.8	19.1	19.6	18.3	18.7	18.7	16.8	17.3	17.1
Vegetable lard substitute.....pound.....	25.6	24.7	24.8	30.0	30.7	30.7	21.3	21.3	21.6	26.2	25.7	25.8	25.8	25.4	25.5
Eggs, strictly fresh.....dozen.....	39.2	39.0	40.8	36.4	40.4	41.3	35.4	36.9	37.3	41.6	39.3	41.6	36.8	33.8	38.4
Bread.....pound.....	8.7	8.3	8.3	9.8	9.8	9.8	11.0	11.0	11.0	9.6	9.9	9.9	8.0	8.6	8.6
Flour.....do.....	5.2	4.6	4.5	5.9	4.9	4.9	6.9	6.4	6.3	5.4	4.6	4.5	5.8	5.3	5.3
Corn meal.....do.....	5.1	5.1	5.2	6.3	6.4	6.4	3.9	4.0	4.0	6.9	6.9	6.8	4.5	4.5	4.5
Rolled oats.....do.....	8.7	8.6	8.6	8.0	8.1	8.1	9.4	9.4	9.3	8.4	8.3	8.2	8.9	8.9	8.9
Corn flakes.....do.....	9.2	9.3	9.3	10.3	10.0	10.0	9.8	10.0	10.0	9.4	9.2	9.1	9.2	9.6	9.6
Wheat cereal.....do.....	24.8	24.9	25.0	28.7	27.9	28.0	25.6	25.6	25.4	25.3	24.7	24.8	24.8	24.9	24.9
Macaroni.....pound.....	21.4	21.5	21.9	19.7	19.9	19.9	18.5	18.6	18.6	18.7	18.6	18.8	18.4	18.1	18.1
Rice.....do.....	9.9	9.4	9.0	11.1	10.6	10.6	6.7	6.7	6.7	10.3	10.6	10.5	9.4	9.4	9.4
Beans, navy.....do.....	11.3	14.6	14.6	10.4	13.5	13.4	11.4	15.2	15.2	12.1	13.7	14.0	12.6	13.9	13.8
Potatoes.....do.....	3.0	1.4	2.1	1.9	1.6	1.8	3.7	2.6	2.7	3.4	2.7	2.8	3.8	2.5	3.5
Onions.....do.....	7.7	8.9	7.7	6.6	8.0	9.4	8.2	9.1	8.7	7.1	7.7	7.4	7.6	8.6	7.5
Cabbage.....do.....	7.8	5.4	5.4	7.8	6.5	6.5	4.9	5.1	3.6	7.8	5.7	5.5	9.2	5.2	5.3
Beans, baked.....do.....	10.1	10.3	10.3	13.5	13.9	13.7	9.9	11.4	11.4	12.7	12.6	12.6	10.4	11.4	11.7
Corn, canned.....do.....	15.7	16.1	16.2	15.0	14.8	14.8	14.8	15.0	15.0	16.1	15.9	15.7	15.4	15.7	15.6
Peas, canned.....do.....	15.6	15.9	15.5	14.1	14.2	14.2	16.4	16.3	16.3	16.7	16.6	16.4	17.2	16.5	16.5
Tomatoes, canned.....do.....	12.7	13.8	13.8	12.8	12.9	12.4	9.8	11.7	11.8	13.5	14.0	14.2	11.6	13.7	14.0
Sugar.....pound.....	6.8	6.1	6.0	8.5	7.6	7.5	6.8	6.1	6.1	6.9	6.3	6.3	7.4	6.6	6.5
Tea.....do.....	69.0	68.3	68.3	82.0	82.6	82.6	80.7	84.0	84.0	69.2	70.8	70.5	80.1	80.5	79.3
Coffee.....do.....	46.8	48.0	47.8	54.6	55.1	55.1	44.8	46.5	47.1	47.3	47.6	47.9	44.8	46.0	46.1
Prunes.....do.....	13.5	14.0	14.1	14.5	13.7	14.3	10.7	12.4	12.6	14.9	16.3	16.4	13.3	14.6	14.3
Raisins.....do.....	12.7	11.0	11.0	14.4	13.2	13.5	12.5	9.9	10.0	14.0	11.6	11.5	14.2	11.9	12.0
Bananas.....do.....	39.9	38.5	39.3	12.8	12.8	13.0	23.3	22.8	22.8	38.9	37.6	37.8	37.5	35.5	36.0
Oranges.....do.....	64.5	47.5	48.4	62.4	43.8	45.0	51.7	27.1	30.0	65.2	44.7	42.0	61.6	38.3	39.9

\* Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, MAY 15, 1928, AND APRIL 15 AND MAY 15, 1929—Continued

Article	Cleveland, Ohio			Columbus, Ohio			Dallas, Tex.			Denver, Colo.			Detroit, Mich.		
	May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929	
		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15
Sirloin steak.....pound	Cts. 45.3	Cts. 48.2	Cts. 49.4	Cts. 44.0	Cts. 46.3	Cts. 49.2	Cts. 42.3	Cts. 46.3	Cts. 47.8	Cts. 38.8	Cts. 41.1	Cts. 42.6	Cts. 47.6	Cts. 51.0	Cts. 53.0
Round steak.....do	39.1	42.3	43.4	39.4	40.9	44.4	39.2	44.3	45.3	36.0	37.8	39.0	39.9	42.3	44.6
Rib roast.....do	31.3	34.0	35.2	33.5	37.4	39.5	33.6	38.0	38.3	30.5	31.1	32.5	35.7	37.8	39.5
Chuck roast.....do	28.0	30.9	32.2	28.3	31.2	32.5	27.5	31.3	31.8	23.8	26.6	27.2	27.6	30.3	32.0
Plate beef.....do	18.7	20.5	20.6	19.2	22.3	23.3	21.3	24.5	24.5	14.4	16.9	17.9	17.5	20.1	21.8
Pork chops.....do	37.1	38.1	38.8	32.4	35.8	36.0	36.5	37.0	37.0	33.9	35.6	35.4	37.7	40.2	41.3
Bacon, sliced.....do	42.3	42.0	41.6	44.6	43.7	45.4	45.9	45.7	45.2	42.3	41.4	41.8	44.6	44.1	44.2
Ham, sliced.....do	53.1	55.9	55.7	49.2	52.7	53.6	54.2	57.0	57.5	51.7	55.3	55.0	53.4	60.6	60.6
Lamb, leg of.....do	40.5	40.5	40.6	45.0	46.7	47.0	46.1	47.5	46.9	38.0	38.9	38.9	42.8	42.7	43.6
Hens.....do	39.0	44.3	43.3	39.3	43.0	42.3	32.2	36.0	35.9	32.6	35.2	34.8	39.3	44.6	45.1
Salmon, canned, red pound	35.7	31.2	31.3	38.0	31.2	31.5	38.2	33.2	32.6	38.2	31.5	31.7	35.7	29.8	29.9
Milk, fresh.....quart	13.7	12.0	12.0	11.0	12.0	12.0	12.3	13.0	13.0	12.0	12.0	12.0	14.0	14.0	14.0
Milk, evaporated 16-ounce can	10.9	11.0	10.9	11.0	11.2	11.2	13.3	13.1	13.2	10.2	10.3	10.1	10.7	10.7	10.5
Butter.....pound	57.3	57.1	54.9	52.4	55.2	53.8	56.7	56.8	56.3	50.8	52.2	49.3	54.5	55.0	54.3
Oleomargarine (all butter substitutes) pound	28.1	28.5	28.5	27.0	27.7	27.5	28.6	28.6	28.6	24.3	24.4	24.3	25.2	25.3	25.1
Cheese.....do	39.8	40.8	40.4	35.9	36.8	37.8	38.0	38.3	38.0	39.4	39.1	38.7	38.9	39.3	39.7
Lard.....do	19.4	19.9	19.8	15.3	15.8	15.5	21.2	20.4	20.6	17.9	18.7	18.4	18.0	18.0	18.1
Vegetable lard substi- tute.....pound	26.8	26.3	26.4	27.2	26.9	27.1	24.0	23.8	23.8	21.4	21.4	21.7	26.6	26.2	25.9
Eggs, strictly fresh dozen	40.9	38.1	40.9	33.6	31.7	34.7	33.7	33.1	33.3	33.1	32.4	33.5	38.6	38.5	41.1
Bread.....pound	7.8	7.8	7.8	7.2	7.7	7.7	9.3	9.2	9.1	8.1	7.6	7.6	8.1	8.1	8.0
Flour.....do	5.8	5.0	5.0	5.2	4.9	4.8	5.6	5.2	5.1	4.6	3.9	3.8	5.3	4.8	4.8
Corn meal.....do	5.5	5.2	5.5	4.3	4.1	4.2	4.6	4.5	4.5	4.6	4.6	4.5	6.0	6.1	6.1
Rolled oats.....do	9.3	9.0	9.0	9.2	9.1	9.0	10.5	10.0	9.9	7.5	7.5	7.5	9.3	9.1	9.0
Corn flakes 8-ounce package	9.9	9.7	9.8	10.0	10.0	10.0	10.2	9.7	9.7	9.5	9.8	9.7	9.2	9.8	9.7
Wheat cereal 28-ounce package	26.1	25.8	25.7	26.4	26.1	26.3	27.8	27.5	27.4	24.5	24.7	24.7	25.7	26.2	26.6
Macaroni.....pound	21.1	20.7	20.8	20.4	20.0	20.0	21.8	21.5	21.5	19.4	19.4	19.6	21.9	20.8	21.0
Rice.....do	10.3	10.1	10.3	11.9	11.0	11.0	11.5	11.4	10.8	8.9	9.0	8.7	11.4	11.2	11.2
Beans, navy.....do	11.7	14.8	14.9	12.5	14.5	14.4	12.2	15.3	15.3	12.1	13.2	12.8	12.6	13.9	13.8
Potatoes.....do	3.7	2.1	3.0	3.0	1.7	2.2	4.8	4.0	4.2	2.4	1.9	2.5	2.5	1.4	1.7
Onions.....do	7.8	8.2	7.2	8.6	9.4	8.4	7.6	8.4	7.8	6.2	6.4	6.3	7.0	7.7	6.3
Cabbage.....do	9.1	5.8	5.7	9.8	6.2	6.2	6.9	5.0	4.9	7.3	3.9	4.6	8.5	5.4	5.6
Beans, baked No. 2 can	12.8	12.0	12.1	11.7	11.9	11.9	12.5	13.3	13.5	11.6	11.7	11.8	11.5	12.0	12.2
Corn, canned.....do	17.0	16.5	16.5	14.8	13.8	13.8	18.7	18.3	18.2	14.1	14.1	14.3	15.7	15.4	15.5
Peas, canned.....do	17.4	17.1	17.2	14.8	14.8	14.8	21.6	21.7	21.6	15.3	14.9	15.3	16.2	15.9	15.8
Tomatoes, canned No. 2 can	13.6	13.9	14.0	12.7	13.7	13.4	11.8	14.3	14.0	12.1	12.0	12.2	12.1	13.2	13.4
Sugar.....pound	7.7	7.1	7.0	7.7	7.0	7.1	7.8	7.0	7.0	7.6	6.9	7.0	7.4	6.7	6.7
Tea.....do	80.0	82.9	82.7	86.2	87.8	87.8	106.5	105.3	104.9	69.9	69.3	69.3	75.4	71.9	72.5
Coffee.....do	52.1	51.6	51.8	48.8	49.3	49.3	57.4	59.1	58.2	49.4	49.8	49.6	47.9	49.7	49.2
Prunes.....do	14.2	14.1	14.2	15.8	15.6	15.8	16.9	17.5	18.5	14.3	15.6	15.8	14.1	15.4	15.8
Raisins.....do	13.6	11.7	11.6	14.1	11.2	11.0	15.3	12.9	13.0	13.3	10.9	10.9	13.4	11.4	11.3
Bananas.....dozen	9.9	9.4	9.4	34.0	37.5	40.0	36.3	35.0	35.0	9.0	9.1	9.7	31.0	34.0	34.0
Oranges.....do	70.2	45.4	46.3	60.3	38.0	41.5	57.4	52.2	46.4	57.0	36.6	41.3	63.1	47.6	41.3

¹ Per pound.



TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, MAY 15, 1928, AND APRIL 15 AND MAY 15, 1929—Continued

Article	Fall River, Mass.			Houston, Tex.			Indianapolis, Ind.			Jacksonville, Fla.			Kansas City, Mo.		
	May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929	
		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15
Sirloin steak... pound	69.5 <sup>1</sup>	68.7 <sup>2</sup>	68.1	38.5	42.3	43.6	45.4	47.1	49.7	38.0	40.0	40.5	42.8	48.6	49.4
Round steak... do	53.3	54.5	55.0	37.0	42.3	44.1	43.1	44.1	47.0	33.5	36.0	36.5	38.2	42.8	44.8
Rib roast... do	36.2	38.1	37.6	30.5	34.1	33.6	32.9	35.0	35.6	29.5	31.5	33.0	30.2	33.9	34.9
Chuck roast... do	27.5	30.0	30.9	25.0	27.9	27.3	28.8	30.8	32.2	22.7	25.3	26.1	24.4	28.0	28.0
Plate beef... do	16.7	16.2	17.2	21.1	24.7	24.2	18.8	21.1	21.6	14.8	16.6	17.4	17.9	20.4	20.5
Pork chops... do	35.1	38.2	36.6	32.7	34.5	34.1	35.8	35.0	36.0	30.0	32.3	32.0	32.0	34.9	35.8
Bacon, sliced... do	42.0	40.2	38.6	40.9	40.0	40.5	41.7	41.2	41.5	36.3	38.1	37.8	41.9	40.7	41.1
Ham, sliced... do	50.9	52.8	54.3	47.5	50.5	51.4	52.9	54.1	55.0	45.0	50.0	49.0	49.1	52.2	53.2
Lamb, leg of... do	43.8	42.4	43.0	32.5	33.3	34.2	44.0	44.5	44.6	41.0	42.0	41.3	37.1	38.2	37.7
Hens... do	44.2	47.3	49.4	34.0	42.8	41.4	39.6	45.2	44.6	43.3	37.8	38.0	33.4	37.1	36.7
Salmon, canned, red															
pound	36.4	33.3	32.9	34.6	29.9	29.5	35.3	31.6	33.3	34.1	30.8	30.4	37.0	34.6	34.3
Milk, fresh... quart	14.0	15.0	15.0	15.6	15.0	15.0	12.0	12.0	12.0	20.3	20.3	20.3	13.0	13.0	13.0
Milk, evaporated															
16-ounce can	12.5	12.4	11.8	10.6	10.5	10.4	10.7	10.3	10.4	11.0	11.0	11.0	11.2	10.9	10.9
Butter... pound	56.2	56.8	56.9	53.8	54.6	53.3	55.1	56.0	54.8	55.1	57.9	56.4	53.6	54.7	52.0
Oleomargarine (all butter substitutes)															
pound	26.6	28.0	27.9	25.5	25.9	24.9	29.5	28.4	28.4	30.4	29.0	28.8	25.5	25.4	25.6
Cheese... do	41.6	41.4	41.0	32.9	33.3	32.6	40.7	41.0	41.0	34.5	34.1	36.4	37.8	37.8	36.4
Lard... do	17.3	17.6	17.5	18.8	20.8	20.9	15.3	16.1	16.0	18.4	19.0	19.3	18.0	18.3	18.5
Vegetable lard substi- tute... pound	27.0	26.4	26.7	15.9	16.7	16.4	26.8	26.9	26.9	20.8	22.6	22.5	26.3	25.6	25.6
Eggs, strictly fresh															
dozen	46.6	47.2	47.3	29.8	30.4	32.1	34.3	33.0	36.1	32.8	34.1	35.4	35.5	34.1	35.7
Bread... pound	8.7	8.5	8.5	8.2	8.4	8.4	7.9	7.9	7.9	10.1	10.0	10.0	9.8	9.5	9.5
Flour... do	5.9	5.5	5.5	5.3	4.8	4.8	5.5	5.1	5.1	6.6	6.0	5.9	5.4	4.7	4.6
Corn meal... do	7.0	6.9	6.5	4.2	4.2	4.1	4.0	4.1	4.2	4.4	4.3	4.3	5.4	5.3	5.3
Rolled oats... do	9.5	9.5	9.5	8.5	8.5	8.4	8.9	8.7	8.7	9.3	9.1	9.3	8.9	9.0	8.9
Corn flakes															
8-ounce package	10.1	9.7	10.0	8.6	9.1	9.0	9.4	9.5	9.5	9.5	9.6	9.7	9.8	9.6	9.6
Wheat cereal															
28-ounce package	25.3	24.5	24.7	25.5	25.6	25.5	25.9	25.3	25.7	24.0	25.5	25.2	26.8	27.2	27.2
Macaroni... pound	23.7	23.3	23.8	18.0	18.3	18.1	19.1	18.1	18.2	17.8	19.1	19.1	20.0	20.3	20.1
Rice... do	11.1	10.9	10.6	7.4	7.1	7.0	11.2	10.6	10.4	7.6	7.6	7.3	9.2	9.2	9.2
Beans, navy... do	12.4	13.7	13.8	12.0	14.7	14.7	12.5	14.3	14.2	11.9	14.6	14.4	11.9	14.4	14.1
Potatoes... do	3.2	2.2	2.3	4.4	3.7	4.4	2.9	2.3	2.4	3.8	2.5	2.6	2.8	1.9	2.0
Onions... do	9.0	8.4	7.1	5.6	6.7	5.8	9.0	8.7	8.5	8.3	9.1	8.1	8.0	8.7	8.2
Cabbage... do	9.7	5.9	5.8	5.5	4.1	4.5	9.4	5.1	5.4	4.7	3.8	3.4	8.9	4.4	5.2
Beans, baked															
No. 2 can	12.1	12.8	12.5	10.5	11.1	11.1	9.8	11.1	10.9	10.5	10.6	10.6	11.8	12.9	12.6
Corn, canned... do	17.4	16.6	15.8	13.8	14.4	14.1	13.8	14.2	14.2	17.5	17.2	17.0	14.9	14.7	14.7
Peas, canned... do	19.4	19.4	18.5	14.1	15.7	15.7	15.0	14.7	14.7	17.9	18.5	18.3	15.4	15.8	15.6
Tomatoes, canned															
No. 2 can	12.0	13.9	13.7	9.9	12.0	11.9	12.2	13.5	14.2	9.7	11.3	11.4	11.3	14.2	13.9
Sugar... pound	7.1	6.3	6.2	7.2	6.3	6.5	7.5	7.0	6.8	7.3	6.2	6.6	7.8	7.0	7.0
Tea... do	58.2	58.8	59.1	82.6	86.2	86.8	87.0	89.8	89.8	96.6	97.4	97.4	93.3	91.8	92.6
Coffee... do	49.8	50.1	50.8	43.0	45.0	44.8	48.0	47.9	48.1	47.6	48.7	47.5	51.7	52.8	51.9
Prunes... do	14.0	13.7	13.0	12.8	13.8	14.3	15.5	16.5	16.7	15.3	13.5	14.1	14.4	15.2	14.8
Raisins... do	12.8	12.2	12.4	12.9	10.6	10.6	14.8	13.3	13.5	14.6	11.9	11.7	14.4	12.4	12.2
Bananas... dozen	9.4 <sup>1</sup>	9.0 <sup>1</sup>	8.4	25.0	24.6	25.4	31.1	30.6	31.3	27.9	28.6	26.4	10.2 <sup>1</sup>	9.1 <sup>1</sup>	9.5
Oranges... do	65.2	41.0	43.8	46.6	38.2	36.3	56.6	39.1	47.0	60.0	16.2	24.3	59.0	38.1	37.6

<sup>1</sup> Per pound.<sup>2</sup> The steak for which prices are here quoted is called "rump" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, MAY 15, 1928, AND APRIL 15 AND MAY 15, 1929—Continued

Article	Little Rock, Ark.			Los Angeles, Calif.			Louisville, Ky.			Manchester, N. H.			Memphis, Tenn.		
	1928			1928			1928			1928			1928		
	May 15, 1928			May 15, 1928			May 15, 1928			May 15, 1928			May 15, 1928		
	May 15, 1928	Apr. 15	May 15	May 15, 1928	Apr. 15	May 15	May 15, 1928	Apr. 15	May 15	May 15, 1928	Apr. 15	May 15	May 15, 1928	Apr. 15	May 15
Sirloin steak, pound	42.3	45.7	47.8	41.5	45.8	45.6	41.5	44.1	46.4	64.0	63.8	64.8	41.8	46.4	47.3
Round steak, do	38.7	42.6	43.8	33.6	38.3	38.6	38.0	40.0	43.3	49.6	51.6	52.5	37.5	43.1	44.8
Rib roast, do	33.3	37.2	37.8	32.6	35.8	35.5	30.4	33.4	34.7	31.0	34.3	35.3	29.8	33.5	34.1
Chuck roast, do	26.6	29.7	30.3	23.6	27.8	27.2	24.6	26.6	28.0	26.3	29.5	30.2	24.2	27.9	29.7
Plate beef, do	20.2	21.4	23.3	15.9	20.0	19.2	20.2	22.7	23.5	19.9	22.0	22.0	20.2	21.2	22.6
Pork chops, do	33.0	33.4	34.5	40.3	43.5	43.4	32.3	33.1	33.6	34.6	36.1	36.5	30.7	33.1	33.6
Bacon, sliced, do	42.9	44.1	44.5	48.1	49.3	48.9	42.6	43.6	45.0	36.6	35.8	37.1	36.5	34.9	35.8
Ham, sliced, do	49.1	52.0	53.5	63.6	68.6	68.2	48.8	48.6	50.0	42.8	48.5	47.8	47.7	54.2	53.5
Lamb, leg of, do	40.0	41.4	40.0	37.6	40.3	39.5	42.7	41.7	46.0	41.3	40.3	39.8	38.1	39.3	39.9
Hens, do	29.8	33.4	33.4	42.3	47.4	46.2	35.6	39.3	39.3	42.1	45.8	45.0	31.3	37.1	37.4
Salmon, canned, red pound	36.8	31.5	30.9	33.7	29.6	29.6	35.5	30.1	28.9	35.3	29.7	29.6	33.4	35.6	35.6
Milk, fresh, quart	15.0	15.0	15.0	15.0	15.0	15.0	12.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
Milk, evaporated 16-ounce can	11.9	11.5	11.5	9.7	10.0	9.9	11.5	11.5	11.3	12.4	12.4	12.3	11.5	11.5	11.3
Butter, pound	54.4	55.7	55.5	50.7	52.0	54.1	56.7	59.1	56.1	58.0	56.3	55.4	55.1	56.7	55.5
Oleomargarine (all butter substitutes) pound	27.1	27.4	27.4	25.4	25.3	24.5	27.3	27.3	25.9	24.6	28.1	28.1	24.5	25.4	25.0
Cheese, do	37.6	37.2	36.5	38.6	38.3	38.3	37.1	37.5	37.8	38.3	38.6	38.4	34.5	34.9	35.3
Lard, do	20.8	20.4	20.5	19.1	20.5	20.5	16.9	18.0	17.2	17.8	17.6	17.6	15.5	16.1	15.9
Vegetable lard substitute, pound	20.4	21.6	21.7	23.6	25.2	24.8	26.8	26.3	26.3	26.4	26.1	26.2	21.7	22.0	22.1
Eggs, strictly fresh dozen	31.5	31.3	33.1	34.5	38.0	41.0	34.2	31.2	35.9	44.2	43.9	45.3	33.4	33.0	34.6
Bread, pound	9.3	9.4	9.4	8.9	8.6	8.6	9.2	9.4	9.4	8.6	8.1	8.1	9.5	9.3	9.3
Flour, do	6.2	6.0	6.0	5.4	4.8	4.9	7.4	5.9	5.8	6.0	4.9	4.9	6.4	6.0	5.9
Corn meal, do	4.1	4.0	4.0	5.8	5.7	5.7	4.2	4.0	4.1	5.2	5.3	5.3	3.9	4.0	4.0
Rolled oats, do	10.5	10.3	10.3	10.0	10.0	10.0	8.6	8.5	8.5	8.8	8.6	8.7	9.1	9.1	9.0
Corn flakes 8-ounce package	10.0	9.8	9.8	9.5	9.5	9.5	9.3	9.4	9.4	9.4	9.0	9.1	9.6	9.7	9.7
Wheat cereal 28-ounce package	27.4	27.3	27.3	25.0	25.0	25.0	26.6	26.8	26.4	25.8	25.6	25.6	25.8	25.8	25.8
Macaroni, pound	20.5	20.1	20.2	18.3	17.9	18.0	18.7	18.7	18.4	23.2	23.1	23.3	19.7	19.6	19.5
Rice, do	8.1	8.1	8.2	10.1	9.8	9.9	11.4	10.3	10.3	9.2	8.5	8.5	8.4	8.3	8.6
Beans, navy, do	11.3	14.5	14.7	12.0	13.4	13.7	12.3	14.7	14.7	12.2	13.9	13.6	12.1	14.2	14.7
Potatoes, do	4.0	2.8	3.1	3.3	2.6	3.1	3.8	3.2	4.0	2.7	1.6	2.2	3.9	3.0	3.3
Onions, do	8.6	9.0	8.3	5.6	7.4	6.9	8.8	8.8	7.9	7.4	8.5	8.1	6.8	7.5	6.4
Cabbage, do	8.0	4.5	4.5	4.9	4.4	4.4	9.8	4.8	5.2	9.8	6.2	6.1	6.9	3.8	4.0
Beans, baked No. 2 can	10.6	12.7	13.0	11.3	11.8	11.7	10.4	11.4	11.1	13.1	13.1	13.4	10.8	12.0	12.2
Corn, canned, do	16.6	16.2	16.2	16.2	15.9	15.6	15.3	15.1	14.9	16.4	16.6	16.6	14.9	14.6	14.7
Peas, canned, do	17.1	18.2	18.2	16.9	16.9	16.8	15.5	15.1	15.1	17.8	17.6	17.8	16.1	16.0	16.2
Tomatoes, canned No. 2 can	10.0	13.0	13.2	14.7	15.3	15.1	10.3	13.4	13.5	12.1	14.1	13.8	9.9	12.0	11.8
Sugar, pound	7.8	7.2	7.1	7.0	6.2	6.0	7.5	6.9	7.1	7.3	6.6	6.5	7.2	6.5	6.4
Tea, do	104.4	104.9	106.3	75.3	74.3	74.5	89.5	92.7	92.7	65.2	63.6	63.6	99.1	95.6	96.4
Coffee, do	53.4	54.5	54.7	53.3	53.9	53.4	49.7	50.5	49.8	51.2	50.4	50.6	49.1	49.0	48.7
Prunes, do	13.9	16.4	16.4	12.6	13.6	13.8	14.7	15.3	15.6	12.7	13.4	13.5	14.7	14.7	14.3
Raisins, do	15.0	13.8	13.8	12.3	10.2	10.3	14.1	11.5	11.9	13.4	10.8	10.9	14.6	12.5	12.4
Bananas, dozen	27.3	27.8	27.5	28.9	29.0	29.0	10.1	9.5	9.5	8.4	9.2	8.6	8.1	7.6	7.9
Oranges, do	60.7	50.3	43.0	55.0	39.3	41.0	57.5	31.5	36.2	62.8	38.2	37.8	58.1	31.9	32.8

<sup>1</sup> The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

<sup>2</sup> Per pound.

<sup>4</sup> No. 2½ can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, MAY 15, 1928, AND APRIL 15 AND MAY 15, 1929—Continued

Article	Milwaukee, Wis.			Minneapolis, Minn.			Mobile, Ala.			Newark, N. J.			New Haven, Conn.		
	1928			1929			1928			1929			1928		
	May 15, 1928	Apr. 15	May 15	May 15, 1928	Apr. 15	May 15	May 15, 1928	Apr. 15	May 15	May 15, 1928	Apr. 15	May 15	May 15, 1928	Apr. 15	May 15
Sirloin steak.....pound	Cts. 42.4	Cts. 45.1	Cts. 47.4	Cts. 39.6	Cts. 43.5	Cts. 44.9	Cts. 39.2	Cts. 45.0	Cts. 47.5	Cts. 50.7	Cts. 53.0	Cts. 53.6	Cts. 58.2	Cts. 61.4	Cts. 61.5
Round steak.....do	37.8	40.6	43.3	35.7	39.4	40.4	38.9	43.1	44.4	48.5	49.1	50.2	46.8	52.4	52.6
Rib roast.....do	31.4	33.5	34.2	30.5	34.5	35.9	31.1	34.4	35.0	39.8	40.1	40.7	38.9	41.5	41.9
Chuck roast.....do	28.0	30.9	31.9	26.7	29.9	30.6	25.6	28.1	29.4	29.2	31.0	32.0	29.6	34.2	33.8
Plate beef.....do	17.9	20.1	20.9	16.7	19.5	19.2	20.5	22.0	24.1	18.4	18.5	18.5	17.3	18.1	18.4
Pork chops.....do	34.0	36.7	36.8	35.0	37.6	37.5	35.0	37.5	33.1	35.8	38.6	39.0	35.4	37.5	39.1
Bacon, sliced.....do	42.3	43.5	43.4	46.4	46.0	45.6	41.5	39.0	39.0	42.8	43.0	42.6	44.1	44.6	44.7
Ham, sliced.....do	45.9	49.1	48.9	47.5	53.1	53.1	48.3	50.0	51.1	51.7	55.6	56.1	58.8	59.5	61.1
Lamb, leg of.....do	43.3	43.4	44.1	37.3	39.8	39.4	40.0	45.0	46.0	43.1	41.5	42.8	45.1	41.5	42.9
Hens.....do	36.3	42.5	41.1	36.9	40.0	40.0	32.6	37.0	37.0	37.8	44.4	44.8	42.5	45.5	46.1
Salmon, canned, red															
.....pound	34.1	36.9	36.6	37.4	35.2	35.4	36.3	29.0	29.0	33.4	28.8	28.7	34.9	31.8	31.4
Milk, fresh.....quart	11.0	11.0	11.0	12.0	12.0	12.0	18.0	18.0	18.0	15.0	16.0	16.0	16.0	16.0	16.0
Milk, evaporated															
.....16-ounce can	10.7	10.9	11.0	11.6	11.6	11.5	10.8	10.9	10.6	10.8	10.6	10.5	11.7	11.6	11.6
Butter.....pound	51.9	52.0	50.6	51.6	51.7	51.0	55.5	57.7	56.3	57.0	57.1	56.1	55.1	57.7	55.9
Oleomargarine (all butter substitutes)															
.....pound	26.3	26.8	26.8	25.5	25.3	25.3	29.9	29.2	29.1	29.9	29.6	29.7	29.6	28.9	29.0
Cheese.....do	37.0	37.8	36.9	36.9	37.3	36.9	36.1	35.0	34.4	40.0	41.8	41.8	40.6	42.2	41.8
Lard.....do	18.3	18.7	18.6	18.4	19.1	18.9	18.7	18.3	18.3	18.5	18.6	18.6	18.5	18.9	18.9
Vegetable lard substitute.....pound	26.4	26.5	26.5	27.4	26.6	26.6	20.7	20.1	19.6	25.6	25.5	25.3	26.2	25.8	26.1
Eggs, strictly fresh															
.....dozen	34.5	31.8	34.7	34.8	32.8	34.0	30.8	31.6	34.4	46.3	46.0	47.0	50.2	49.4	49.6
Bread.....pound	8.7	8.7	8.7	8.9	8.9	9.0	10.1	10.1	10.1	9.1	8.8	8.8	9.2	8.8	8.8
Flour.....do	5.0	4.4	4.3	5.2	4.4	4.4	6.3	5.8	5.7	5.4	4.8	5.0	5.6	5.0	5.0
Corn meal.....do	5.8	6.1	6.1	5.7	5.5	5.5	4.1	3.8	3.9	6.9	6.7	6.7	6.8	6.9	6.8
Rolled oats.....do	8.2	8.2	8.2	8.0	7.9	7.9	8.5	8.3	8.1	8.2	8.7	8.7	9.4	9.1	9.4
Corn flakes															
.....8-ounce package	9.3	9.5	9.6	9.7	9.4	9.6	9.2	9.2	9.0	8.8	8.9	8.9	9.9	9.9	9.9
Wheat cereal															
.....28-ounce package	24.7	24.7	24.7	25.3	25.4	25.4	24.4	24.2	24.2	24.7	26.2	26.2	24.8	24.8	24.3
Macaroni.....pound	17.6	17.8	17.8	18.4	17.6	17.6	21.1	20.9	20.9	21.4	21.5	21.5	22.2	22.0	21.8
Rice.....do	10.2	9.7	9.9	9.7	9.9	10.0	8.8	8.3	7.8	9.6	9.6	9.6	10.3	10.2	10.2
Beans, navy.....do	12.2	14.0	14.3	12.8	14.5	14.4	11.5	13.7	14.1	12.4	14.8	14.8	11.4	14.1	14.0
Potatoes.....do	2.7	1.5	1.5	2.5	1.5	1.5	4.1	2.9	3.2	4.0	2.6	3.1	3.1	2.0	2.4
Onions.....do	7.7	8.6	7.4	8.5	9.3	8.4	7.4	8.1	5.9	7.9	8.3	7.3	8.2	8.9	8.3
Cabbage.....do	8.7	5.4	5.2	9.1	4.7	5.1	5.8	3.7	3.4	7.6	5.3	4.8	9.3	5.9	6.3
Beans, baked															
.....No. 2 can	11.1	11.5	11.6	12.3	12.6	12.6	10.3	10.8	10.8	10.4	10.8	10.8	11.7	12.2	12.5
Corn, canned.....do	15.7	16.1	16.0	15.0	15.0	15.3	16.1	14.4	14.4	17.8	16.4	16.5	18.2	18.1	18.5
Peas, canned.....do	15.8	16.0	15.9	14.9	15.6	15.5	15.7	15.1	15.1	17.6	17.1	17.1	19.8	21.1	21.3
Tomatoes, canned															
.....No. 2 can	13.1	13.8	14.0	13.4	13.8	13.9	10.2	11.8	11.6	10.5	12.0	12.2	13.1	14.6	14.5
Sugar.....pound	6.9	6.2	6.1	7.2	6.5	6.5	7.1	6.2	6.4	6.9	6.1	6.2	7.1	6.3	6.4
Tea.....do	70.2	69.0	69.0	61.9	67.9	68.4	78.5	79.7	79.7	60.2	57.8	57.8	59.5	59.9	59.1
Coffee.....do	44.5	45.1	46.2	52.6	54.0	53.8	48.2	48.7	50.2	49.2	48.3	48.3	51.7	51.4	51.7
Prunes.....do	13.8	14.6	14.7	13.9	14.8	14.7	13.8	12.6	12.6	12.8	14.0	14.3	13.3	14.5	14.4
Raisins.....do	13.8	12.3	12.2	14.2	11.7	11.7	13.0	9.7	9.6	13.6	11.0	11.1	13.5	12.6	12.5
Bananas.....dozen	8.8	9.4	9.0	10.2	9.7	9.7	24.3	23.0	21.7	38.0	37.5	37.5	33.8	33.3	33.5
Oranges.....do	59.3	43.6	43.1	60.0	36.7	39.2	56.8	29.0	30.1	72.5	46.1	48.0	65.4	48.5	45.9

\* Per pound.



TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, MAY 15, 1928, AND APRIL 15 AND MAY 15, 1929—Continued

Article	New Orleans, La.			New York, N. Y.			Norfolk, Va.			Omaha, Nebr.			Peoria, Ill.		
	1928			1928			1928			1928			1928		
	May 15, 1928	Apr. 15	May 15	May 15, 1928	Apr. 15	May 15	May 15, 1928	Apr. 15	May 15	May 15, 1928	Apr. 15	May 15	May 15, 1928	Apr. 15	May 15
Sirloin steak...pound..	Cts. 40.1	Cts. 45.0	Cts. 45.8	Cts. 49.6	Cts. 52.2	Cts. 53.2	Cts. 43.1	Cts. 46.5	Cts. 47.5	Cts. 40.8	Cts. 45.6	Cts. 47.1	Cts. 37.8	Cts. 40.7	Cts. 43.3
Round steak...do....	35.7	39.8	40.9	47.1	49.5	50.9	38.1	40.4	41.5	38.8	43.6	45.3	37.0	39.7	41.6
Rib roast...do....	33.7	37.2	38.4	42.9	43.4	43.7	34.3	39.1	39.8	28.3	31.7	32.2	27.9	31.0	32.2
Chuck roast...do....	24.5	26.6	27.6	28.4	30.3	30.8	25.5	28.7	28.5	25.1	28.5	29.7	25.0	27.4	29.5
Plate beef...do....	18.9	22.6	22.6	23.6	24.5	24.8	17.3	20.6	21.9	14.9	19.1	19.3	17.1	19.5	19.7
Pork chops...do....	35.9	35.4	37.0	38.7	39.8	40.3	33.2	34.3	34.5	34.2	35.8	35.2	32.2	34.4	35.1
Bacon, sliced...do....	43.1	42.8	42.8	44.9	45.0	45.2	42.3	41.2	41.6	45.0	42.9	43.5	43.8	43.3	43.8
Ham, sliced...do....	48.3	52.0	53.0	54.8	57.8	58.2	45.5	44.8	45.0	48.2	53.7	53.4	49.2	49.6	50.8
Lamb, leg of...do....	42.0	41.1	40.4	41.4	40.1	40.8	41.7	42.5	42.5	38.9	40.1	39.5	40.9	41.9	46.9
Hens...do....	35.1	41.3	40.3	40.2	45.0	46.0	36.1	39.5	40.3	32.2	36.7	36.6	34.7	38.1	38.8
Salmon, canned, red															
...pound..	35.7	35.8	35.1	34.6	30.5	30.7	36.4	32.7	32.3	36.0	34.6	34.3	35.2	33.3	33.3
Milk, fresh...quart..	14.0	14.0	14.0	15.0	16.0	16.0	18.0	18.0	18.0	10.3	11.3	11.3	13.0	13.0	13.0
Milk, evaporated															
16-ounce can	10.7	10.3	10.3	10.6	10.5	10.1	11.0	11.1	10.8	11.2	11.4	11.1	10.9	11.0	10.7
Butter...pound..	56.3	56.9	56.2	55.6	55.2	54.0	58.9	59.9	59.1	49.5	52.4	50.0	51.1	51.8	49.8
Oleomargarine (all butter substitutes)															
...pound..	28.2	28.4	28.4	27.6	28.0	28.2	25.0	26.6	26.3	26.0	26.1	26.0	27.6	27.7	27.7
Cheese...do....	37.7	38.7	37.6	40.8	40.8	40.2	35.2	34.9	34.8	36.0	35.1	35.1	36.8	36.5	36.5
Lard...do....	17.2	18.5	18.4	19.0	19.7	19.6	17.5	18.4	18.2	18.9	19.6	19.6	17.9	18.8	18.7
Vegetable lard substitute...pound..	20.0	20.1	20.0	25.8	25.7	25.7	21.8	21.9	21.7	25.7	25.4	25.4	27.7	27.6	27.6
Eggs, strictly fresh															
...dozen..	36.3	34.7	38.6	47.1	45.9	47.9	35.9	37.4	39.5	31.8	30.1	32.2	32.3	31.1	33.5
Bread...pound..	8.9	8.8	8.8	8.8	8.6	8.6	9.9	9.4	9.4	9.6	9.8	9.1	10.0	10.0	10.0
Flour...do....	7.0	6.6	6.6	5.5	5.0	5.0	5.6	5.2	5.2	4.7	4.2	4.1	5.4	4.7	4.6
Corn meal...do....	4.0	4.2	4.1	6.6	6.8	6.7	4.6	4.7	4.7	4.5	4.6	4.7	4.9	4.9	4.9
Rollod oats...do....	8.5	8.5	8.5	8.6	8.7	8.6	8.5	8.8	8.7	9.9	9.8	10.0	8.8	8.6	8.6
Corn flakes															
8-ounce package	9.4	9.4	9.4	8.8	9.0	9.0	9.7	9.7	9.7	10.1	9.8	10.0	9.6	9.6	9.6
Wheat cereal															
28-ounce package	24.8	25.2	25.2	24.2	24.5	24.4	25.3	24.9	24.9	28.0	27.1	27.3	26.1	25.7	25.7
Macaroni...pound..	10.7	10.4	10.9	20.9	20.7	20.6	19.0	19.0	19.1	21.0	21.2	21.0	18.5	18.8	18.8
Rice...do....	9.4	8.6	8.6	9.9	9.8	9.6	11.1	10.7	10.7	10.7	9.9	10.1	10.4	9.3	9.3
Beans, navy...do....	10.6	13.6	13.7	12.2	14.6	15.0	11.1	14.1	14.3	12.6	13.8	13.6	12.5	14.4	14.2
Potatoes...do....	3.7	3.0	3.3	4.2	3.0	3.2	4.1	2.7	3.3	2.7	1.9	1.7	2.6	1.5	1.5
Onions...do....	5.6	6.6	4.8	7.7	8.4	7.3	7.1	8.0	8.2	8.0	9.0	8.0	9.4	9.6	8.5
Cabbage...do....	5.1	3.8	3.8	8.6	6.5	5.7	7.8	5.8	4.5	8.8	5.0	5.2	9.7	5.6	5.5
Beans, baked															
No. 2 can..	11.0	11.1	11.1	11.1	11.5	11.7	9.9	10.6	10.5	13.3	13.2	13.1	10.3	11.5	11.4
Corn, canned...do....	15.3	15.6	15.2	15.2	14.9	15.1	15.0	15.2	15.4	16.0	15.7	15.4	15.0	14.4	14.3
Peas, canned...do....	17.4	17.1	16.5	15.6	15.4	15.5	17.0	17.5	17.8	15.8	15.1	15.2	16.8	17.3	17.3
Tomatoes, canned															
No. 2 can..	10.3	12.6	12.7	11.0	12.6	12.7	9.7	11.9	12.0	13.3	14.6	14.7	12.4	13.3	13.5
Sugar...pound..	6.7	5.8	5.9	6.5	5.6	5.6	6.8	6.4	6.3	7.3	6.5	6.5	8.1	7.4	7.2
Tea...do....	78.3	83.1	83.9	68.0	67.4	67.4	95.7	94.8	94.3	77.8	78.7	78.0	66.3	65.2	65.2
Coffee...do....	35.5	38.0	38.1	46.3	45.2	45.0	48.8	50.6	50.3	53.7	53.6	53.6	48.9	49.5	49.1
Prunes...do....	13.6	14.1	14.2	12.8	13.2	13.4	13.7	13.5	14.2	14.3	14.7	15.1	14.8	16.3	15.7
Raisins...do....	12.6	10.1	10.1	13.8	11.5	11.6	13.8	11.4	11.7	14.6	13.3	13.3	13.8	11.6	12.1
Bananas...dozen..	16.4	15.8	16.0	39.0	38.1	37.9	33.3	32.3	32.3	29.5	29.6	29.4	27.9	29.1	28.9
Oranges...do....	60.3	43.3	47.3	73.8	54.1	53.0	58.1	39.0	43.8	52.2	33.0	37.9	55.8	36.7	36.7

\* Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, MAY 15, 1928, AND APRIL 15 AND MAY 15, 1929—Continued

Article	Philadelphia, Pa.			Pittsburgh, Pa.			Portland, Me.			Portland, Oreg.		
	May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929	
		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15
Sirloin steak.....pound..	Cts. 161.4	Cts. 164.0	Cts. 165.0	Cts. 51.2	Cts. 54.6	Cts. 55.7	Cts. 167.1	Cts. 171.3	Cts. 172.4	Cts. 35.5	Cts. 36.9	Cts. 39.8
Round steak.....do.....	47.1	49.4	51.1	42.6	45.6	47.4	50.8	51.2	53.5	33.3	35.8	38.4
Rib roast.....do.....	41.0	42.2	42.0	38.1	39.6	40.8	33.5	36.5	37.5	30.4	30.6	32.3
Chuck roast.....do.....	31.0	33.5	34.8	30.5	32.0	34.2	24.8	28.2	28.7	23.8	26.4	28.3
Plate beef.....do.....	17.7	19.7	19.7	17.7	19.9	19.9	20.8	24.4	25.6	19.0	20.8	22.2
Pork chops.....do.....	40.2	41.2	42.6	38.1	40.8	39.9	35.5	37.9	38.4	31.8	36.1	36.9
Bacon, sliced.....do.....	41.3	42.0	42.4	47.6	46.7	47.9	39.5	39.2	39.2	50.0	50.5	50.9
Ham, sliced.....do.....	53.1	58.0	59.5	57.4	58.8	59.7	49.5	54.6	54.6	53.8	55.6	56.9
Lamb, leg of.....do.....	43.8	42.8	43.8	44.4	44.3	44.7	43.1	42.2	40.3	38.3	40.6	40.4
Hens.....do.....	42.2	46.0	46.9	45.2	50.0	50.6	41.9	44.7	44.9	34.9	36.9	37.1
Salmon, canned, red.....do.....	32.5	28.4	28.3	33.8	29.1	28.9	35.4	29.8	29.6	34.8	32.6	32.0
Milk, fresh.....quart..	13.0	13.0	13.0	13.0	14.0	14.0	15.0	15.0	15.0	12.0	12.0	12.0
Milk, evaporated.....16-ounce can..	11.4	11.2	10.9	10.3	10.6	10.5	12.2	12.0	11.7	10.2	10.1	10.1
Butter.....pound..	59.1	58.5	57.3	55.0	57.6	55.1	57.9	59.3	56.8	50.5	53.6	53.2
Oleomargarine (all butter substitutes).....pound..	28.6	28.4	28.5	28.3	28.0	28.0	26.6	27.1	27.1	26.4	26.3	26.2
Cheese.....do.....	42.8	42.8	42.6	41.6	41.4	42.0	39.4	38.9	38.9	37.8	38.2	38.4
Lard.....do.....	17.2	18.1	18.2	17.9	18.2	17.9	17.4	17.6	17.4	20.0	18.7	18.7
Vegetable lard substitute.....do.....	24.5	25.0	24.9	27.2	27.1	27.2	26.2	25.7	25.6	28.4	28.3	28.3
Eggs, strictly fresh.....dozen..	41.7	38.3	41.7	41.8	39.8	42.1	43.6	44.3	44.7	31.2	33.0	35.7
Bread.....pound..	9.3	8.3	8.3	8.5	8.9	8.9	10.1	8.8	8.8	9.2	9.3	9.3
Flour.....do.....	5.2	4.8	4.8	5.3	4.6	4.6	5.9	5.0	4.9	5.0	4.7	4.7
Corn meal.....do.....	5.1	5.0	5.1	6.0	5.9	6.1	5.1	5.4	5.3	6.0	5.9	5.8
Rollod oats.....do.....	8.5	8.2	8.2	8.9	9.2	9.2	7.9	7.7	7.6	10.6	10.1	10.4
Corn flakes.....8-ounce package..	9.3	8.7	8.7	9.6	9.7	9.6	9.5	9.7	9.6	9.6	9.6	9.6
Wheat cereal.....28-ounce package..	25.2	24.6	24.6	25.0	24.7	24.6	25.4	25.8	25.8	27.0	27.0	26.8
Macaroni.....pound..	20.7	20.4	20.4	22.4	22.6	22.6	23.2	23.4	23.5	18.6	18.3	18.3
Rice.....do.....	10.4	10.3	10.1	11.0	11.0	11.3	11.4	11.3	11.3	10.2	9.9	9.9
Beans, navy.....do.....	10.6	15.0	15.1	11.9	14.3	14.5	12.0	13.6	13.8	13.2	14.5	14.5
Potatoes.....do.....	4.2	2.6	3.7	3.4	2.3	3.2	2.5	1.7	2.4	2.0	2.1	2.3
Onions.....do.....	6.9	8.1	6.4	7.8	8.8	7.6	7.9	8.2	7.6	5.9	5.6	6.9
Cabbage.....do.....	8.4	5.3	4.7	8.4	5.5	5.4	7.1	6.1	5.6	8.3	6.2	6.9
Beans, baked.....No. 2 can..	10.8	11.3	11.2	12.7	13.1	13.0	15.4	15.7	15.7	11.9	12.8	13.3
Corn, canned.....do.....	14.7	15.1	15.2	15.9	15.7	15.9	14.8	14.4	14.5	17.9	17.9	17.7
Peas, canned.....do.....	15.5	15.5	15.5	17.4	16.4	16.9	17.9	17.8	17.7	17.6	17.1	17.1
Tomatoes, canned.....do.....	11.3	12.9	13.3	11.8	13.4	14.0	12.2	12.9	12.9	15.2	15.7	15.5
Sugar.....pound..	6.7	5.6	5.7	7.4	6.7	6.7	7.1	6.3	6.2	7.1	6.5	6.6
Tea.....do.....	68.2	70.2	69.2	80.9	83.3	83.3	61.8	61.5	61.5	78.6	77.8	77.8
Coffee.....do.....	43.5	43.7	44.0	48.5	49.6	49.5	51.8	52.6	52.6	52.6	53.6	53.1
Prunes.....do.....	12.4	12.4	12.8	14.1	13.8	14.0	11.3	13.0	13.5	11.0	14.0	14.5
Raisins.....do.....	13.3	10.7	10.6	13.4	11.5	11.5	12.4	10.7	10.8	13.0	11.4	11.2
Bananas.....dozen..	31.2	29.5	28.4	37.5	35.0	35.7	10.3	10.5	10.5	10.2	10.0	10.1
Oranges.....do.....	71.6	35.4	39.2	65.7	36.9	41.1	70.4	42.4	47.2	53.4	35.2	41.7

<sup>1</sup> The steak for which prices are here quoted is called "sirloin" in this city, but in most other cities included in this report it would be known as "porterhouse" steak.

<sup>2</sup> Per pound.

<sup>3</sup> No. 2½ can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, MAY 15, 1928, AND APRIL 15 AND MAY 15, 1929—Continued

Article	Providence, R. I.			Richmond, Va.			Rochester, N. Y.			St. Louis, Mo.		
	May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929	
		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15
Sirloin steak.....pound..	Cts. 77.7	Cts. 76.9	Cts. 78.7	Cts. 43.9	Cts. 45.9	Cts. 47.9	Cts. 45.4	Cts. 46.2	Cts. 47.5	Cts. 41.7	Cts. 45.2	Cts. 48.1
Round steak.....do.....	53.7	55.0	56.7	38.8	41.8	43.2	38.0	40.2	41.6	40.0	44.0	47.1
Rib roast.....do.....	41.9	42.5	43.9	33.7	36.3	37.3	34.1	35.0	35.8	33.8	36.4	37.7
Chuck roast.....do.....	32.5	34.1	34.4	25.9	28.3	28.9	27.9	30.5	31.5	25.0	28.8	30.6
Plate beef.....do.....	21.8	26.0	26.9	18.9	21.2	21.3	16.1	18.9	19.5	17.5	21.3	21.6
Pork chops.....do.....	39.9	39.5	41.8	35.3	37.3	38.8	39.2	39.9	40.0	30.7	33.4	32.9
Bacon, sliced.....do.....	40.5	40.5	41.3	40.8	39.7	39.7	37.8	37.4	36.9	39.8	41.2	42.4
Ham, sliced.....do.....	53.9	55.4	56.5	44.5	45.4	45.6	50.4	53.6	53.6	50.8	54.7	53.9
Lamb, leg of.....do.....	44.8	42.6	43.4	45.9	45.4	47.1	43.1	42.2	41.2	40.3	42.7	42.8
Hens.....do.....	41.8	46.4	47.3	36.6	40.1	39.8	40.6	44.8	45.2	35.1	41.1	41.3
Salmon, canned, red.....do.....	33.6	30.2	29.8	34.8	31.8	31.3	36.0	31.4	31.4	35.5	31.7	31.4
Milk, fresh.....quart.....	14.5	15.7	15.7	14.0	14.0	14.0	12.5	13.5	13.5	13.0	13.0	13.0
Milk, evaporated.....16-ounce can.....	11.4	11.7	11.5	12.1	12.2	12.3	11.2	11.1	11.0	10.0	10.2	10.0
Butter.....pound.....	55.7	56.9	55.1	59.4	62.4	61.0	54.0	56.9	55.8	55.0	57.5	55.4
Oleomargarine (all butter substitutes).....pound.....	26.7	26.6	26.6	29.4	30.0	30.0	28.2	28.3	28.1	27.1	26.3	26.3
Cheese.....do.....	38.6	39.0	38.6	37.2	36.7	36.8	38.9	39.8	39.8	36.7	36.8	36.2
Lard.....do.....	17.1	17.4	17.4	17.0	18.1	17.8	16.7	17.3	17.0	14.8	15.0	14.9
Vegetable lard substitute.....do.....	26.5	26.2	26.5	25.7	25.5	25.7	26.2	26.0	26.0	25.3	25.3	25.4
Eggs, strictly fresh.....dozen.....	45.2	45.1	48.1	34.9	32.9	37.8	37.0	37.1	38.4	25.7	33.5	36.1
Bread.....pound.....	9.0	9.0	9.0	9.1	8.9	8.9	9.1	8.5	8.6	9.6	9.3	9.3
Flour.....do.....	5.8	5.2	5.2	5.4	5.1	5.0	5.7	4.9	4.9	5.4	4.8	4.7
Corn meal.....do.....	5.0	5.1	5.0	4.8	5.0	4.9	6.3	5.9	5.7	4.3	4.5	4.3
Rolled oats.....do.....	9.0	9.0	9.0	8.6	8.6	9.0	9.3	9.0	8.8	8.1	8.1	8.1
Corn flakes.....8-ounce package.....	9.4	9.7	9.7	9.8	9.7	9.7	9.2	9.2	9.2	8.8	9.2	9.2
Wheat cereal.....28-ounce package.....	24.8	24.8	24.8	26.0	25.9	26.1	25.1	25.6	25.6	24.7	24.3	24.2
Macaroni.....pound.....	22.9	22.5	22.8	20.2	20.5	20.7	21.2	19.9	19.3	19.7	19.6	19.4
Rice.....do.....	10.1	10.1	9.9	11.5	11.4	11.4	9.6	8.8	8.8	9.7	10.0	9.9
Beans, navy.....do.....	13.0	13.7	13.7	11.8	14.5	14.5	12.9	14.4	14.4	12.0	13.8	14.2
Potatoes.....do.....	2.9	1.8	2.1	4.1	2.9	3.6	2.7	1.2	2.6	3.1	2.6	3.8
Onions.....do.....	7.6	8.0	6.8	7.9	9.4	9.0	7.7	7.6	6.4	6.7	7.9	6.9
Cabbage.....do.....	8.8	5.2	4.7	9.1	5.0	4.8	9.0	5.7	6.2	8.1	4.5	4.9
Beans, baked.....No. 2 can.....	10.8	11.4	11.4	10.3	11.2	11.0	10.2	10.8	10.8	10.3	10.6	10.6
Corn, canned.....do.....	17.2	16.6	16.8	15.0	15.8	15.6	16.3	16.1	16.6	15.4	15.7	15.3
Peas, canned.....do.....	19.2	18.2	18.0	17.7	17.6	17.6	17.7	17.4	16.8	14.9	14.9	15.3
Tomatoes, canned.....do.....	12.9	13.7	13.6	10.5	12.4	12.3	14.1	14.9	15.7	10.5	12.8	13.1
Sugar.....pound.....	6.9	6.0	5.9	7.0	6.4	6.3	6.6	5.9	5.7	7.2	6.6	6.4
Tea.....do.....	60.1	59.8	59.8	90.3	94.5	94.5	69.0	70.1	70.1	74.3	76.2	74.5
Coffee.....do.....	51.3	51.8	52.2	47.0	48.2	48.3	46.6	48.2	47.2	47.1	47.1	46.6
Prunes.....do.....	12.9	13.5	13.8	14.0	14.9	14.6	14.2	14.6	14.9	14.4	14.7	14.6
Raisins.....do.....	13.3	11.3	11.6	13.3	11.0	11.0	13.7	11.6	11.6	13.9	11.1	11.0
Bananas.....dozen.....	33.6	30.7	32.1	36.8	35.0	34.5	35.0	28.0	27.0	31.7	31.0	32.0
Oranges.....do.....	74.8	47.5	43.4	57.5	36.2	40.9	63.1	51.1	45.4	59.9	43.5	41.3

<sup>1</sup> The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.



TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, MAY 15, 1928, AND APRIL 15 AND MAY 15, 1929—Continued

Article	St. Paul, Minn.			Salt Lake City, Utah			San Francisco, Calif.			Savannah, Ga.		
	May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929	
		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15
Sirloin steak.....pound	Cts. 40.6	Cts. 41.1	Cts. 44.2	Cts. 36.1	Cts. 39.1	Cts. 40.0	Cts. 37.5	Cts. 40.9	Cts. 41.0	Cts. 41.1	Cts. 43.2	Cts. 44.5
Round steak.....do	36.0	37.1	39.1	33.9	38.1	38.5	35.1	39.4	39.2	35.6	38.2	39.0
Rib roast.....do	34.1	34.5	35.9	28.0	32.8	33.0	33.5	37.0	36.6	31.7	33.8	34.7
Chuck roast.....do	27.4	28.5	29.8	23.1	26.6	27.3	22.5	26.6	25.8	23.6	26.1	27.2
Plate beef.....do	17.2	18.1	18.8	16.7	20.3	20.7	17.8	21.4	20.5	20.1	21.0	21.7
Pork chops.....do	34.3	34.2	35.6	34.8	39.5	39.1	38.5	42.0	42.1	30.6	31.2	31.3
Bacon, sliced.....do	42.2	43.3	43.3	44.2	43.8	44.5	54.5	56.0	55.3	38.5	37.5	37.9
Ham, sliced.....do	44.7	49.4	50.0	51.9	56.2	57.3	59.7	63.3	63.3	42.0	42.9	43.6
Lamb, leg of.....do	36.7	38.0	37.8	39.5	40.8	41.1	39.9	43.1	40.7	40.0	42.5	42.0
Hens.....do	35.1	38.3	38.6	33.8	35.0	35.8	42.4	44.5	44.8	30.7	36.9	36.9
Salmon, canned, red.....do	39.6	34.2	35.8	36.2	33.6	33.6	32.1	28.1	28.1	35.9	33.2	33.0
Milk, fresh.....quart	12.0	12.0	12.0	10.0	10.0	10.0	14.0	14.0	14.0	17.0	17.5	17.5
Milk, evaporated.....16-ounce can	11.8	11.5	11.5	10.1	10.0	10.0	10.0	9.9	9.9	10.9	10.8	10.8
Butter.....pound	50.2	50.3	48.8	47.7	47.0	46.6	51.0	52.8	54.1	56.8	57.4	55.7
Oleomargarine (all butter substitutes).....pound	24.3	24.5	24.0	25.8	25.2	25.2	25.4	24.9	24.9	30.6	30.6	30.4
Cheese.....do	36.5	35.5	35.6	30.6	29.9	29.8	41.2	39.3	39.5	34.8	35.8	35.6
Lard.....do	18.4	19.0	18.9	20.1	20.3	20.0	22.2	22.3	22.3	17.4	18.3	18.0
Vegetable lard substitute.....do	27.7	27.1	27.3	28.6	29.3	29.6	27.5	27.5	27.8	17.3	17.0	17.2
Eggs, strictly fresh.....dozen	35.2	31.9	33.4	30.5	30.1	31.9	35.2	35.7	37.7	33.8	33.5	34.7
Bread.....pound	9.3	9.3	9.3	9.7	9.7	9.7	9.5	9.3	9.3	10.6	10.7	10.7
Flour.....do	5.3	4.6	4.5	4.3	3.6	3.6	5.9	5.2	5.1	6.7	6.5	6.3
Corn meal.....do	5.2	5.3	5.3	5.6	5.9	5.9	6.9	7.2	7.1	3.7	3.6	3.5
Rollod oats.....do	9.8	9.9	10.1	8.5	8.8	8.8	10.0	10.0	9.8	8.6	8.4	8.5
Corn flakes.....8-ounce package	10.0	10.3	10.3	10.2	10.3	10.2	9.7	9.6	9.5	9.5	9.6	9.6
Wheat cereal.....28-ounce package	26.1	26.2	26.2	25.3	25.5	25.5	25.2	25.1	25.4	24.3	24.0	24.0
Macaroni.....pound	18.9	18.7	18.4	19.6	19.5	19.5	15.7	16.2	16.4	18.1	17.9	17.9
Rice.....do	10.4	10.9	10.6	8.3	8.6	8.9	10.2	9.5	9.3	9.1	9.2	9.2
Beans, navy.....do	12.6	14.6	14.6	11.1	12.3	12.5	11.8	13.3	13.4	11.8	14.7	15.4
Potatoes.....do	2.4	1.3	1.2	1.8	1.7	1.6	3.1	2.8	3.0	4.1	2.8	3.0
Onions.....do	8.1	8.4	7.9	6.3	6.8	7.7	6.0	6.7	6.0	8.5	9.0	7.7
Cabbage.....do	9.1	5.0	5.3	8.6	5.1	5.2				5.4	3.7	3.4
Beans, baked.....No. 2 can	13.3	13.8	13.8	12.1	12.3	12.6	12.9	12.6	12.9	11.7	10.7	10.8
Corn, canned.....do	15.0	15.1	14.9	14.0	14.1	14.2	17.6	17.3	17.4	15.2	14.8	15.0
Peas, canned.....do	15.5	14.9	14.9	15.1	14.8	14.9	18.7	17.8	18.0	16.0	16.8	16.7
Tomatoes, canned.....do	13.9	14.7	14.6	14.0	13.8	14.2	14.1	15.3	15.5	9.5	11.6	11.4
Sugar.....pound	7.4	6.8	6.8	7.8	6.8	6.8	6.9	6.2	6.1	6.9	5.9	6.1
Tea.....do	67.0	72.3	72.0	84.6	85.5	85.6	71.4	71.7	71.7	80.8	74.2	74.7
Coffee.....do	52.8	52.8	52.5	53.4	55.1	55.0	53.5	53.5	53.5	45.9	46.3	46.3
Prunes.....do	13.9	14.5	14.3	11.8	13.8	14.0	11.7	12.1	12.1	12.5	13.0	13.3
Raisins.....do	14.5	13.9	13.6	12.8	11.6	11.5	11.8	10.0	10.3	13.5	11.8	11.6
Bananas.....dozen	29.9	29.9	29.9	29.9	29.9	29.9	29.4	29.8	29.5	24.8	27.5	27.5
Oranges.....do	64.5	42.5	42.2	54.5	33.7	40.6	58.7	40.0	43.6	54.1	23.9	30.6

<sup>2</sup> Per pound.<sup>4</sup> No. 2½ can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, MAY 15, 1928, AND APRIL 15 AND MAY 15, 1929—Continued

Articles	Scranton, Pa.			Seattle, Wash.			Springfield, Ill.			Washington, D. C.		
	May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929		May 15, 1928	1929	
		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15		Apr. 15	May 15
Sirloin steak.....pound..	Cts. 55.9	Cts. 60.7	Cts. 60.7	Cts. 39.1	Cts. 42.9	Cts. 45.8	Cts. 43.5	Cts. 42.7	Cts. 43.6	Cts. 48.7	Cts. 55.0	Cts. 56.1
Round steak.....do.....	47.8	49.7	50.9	35.5	39.2	41.5	42.1	42.7	43.6	42.9	49.5	51.1
Rib roast.....do.....	39.9	41.5	42.4	32.1	34.8	36.3	29.3	31.6	33.1	35.8	39.4	39.4
Chuck roast.....do.....	31.4	33.8	35.0	24.6	27.9	29.2	27.2	28.6	29.5	27.9	31.3	32.1
Plate beef.....do.....	15.8	19.4	20.8	19.1	22.2	23.0	19.3	20.5	21.5	16.8	20.5	19.7
Pork chops.....do.....	37.7	41.0	40.8	36.2	39.5	40.1	33.3	33.5	33.3	37.2	41.8	43.2
Bacon, sliced.....do.....	44.6	47.1	46.9	52.8	54.8	54.7	44.1	42.7	42.7	39.2	42.9	43.7
Ham, sliced.....do.....	55.0	59.3	59.4	57.5	59.1	59.3	48.2	50.9	50.5	55.3	58.7	59.1
Lamb, leg of.....do.....	47.0	48.5	48.5	40.9	42.3	42.9	46.1	45.0	45.4	46.6	42.9	45.7
Hens.....do.....	43.8	47.8	47.6	35.0	36.1	38.0	34.4	37.0	37.3	40.3	45.1	47.6
Salmon, canned, red.....do.....	36.0	32.7	31.7	36.8	33.3	32.8	37.2	33.8	33.8	34.5	28.9	29.1
Milk, fresh.....quart.....	13.0	13.0	13.0	12.0	12.0	12.0	14.4	14.4	14.4	15.0	14.8	14.8
Milk, evaporated.....16-ounce can.....	11.9	11.8	11.4	10.1	10.3	10.3	11.7	11.6	11.6	11.9	11.7	11.3
Butter.....pound.....	56.6	57.4	56.6	51.0	54.2	54.1	53.6	53.9	52.2	58.3	58.4	57.0
Oleomargarine (all butter substitutes).....pound.....	26.8	27.5	27.8	25.3	24.9	25.0	28.4	28.2	28.2	27.1	26.5	26.8
Cheese.....do.....	37.9	38.1	38.4	36.1	35.4	35.6	37.1	36.5	36.9	40.4	41.2	40.7
Lard.....do.....	18.8	19.5	19.5	19.9	20.0	20.0	17.9	18.2	18.2	17.5	16.6	17.0
Vegetable lard substitutes.....do.....	25.6	26.2	26.6	26.9	27.0	26.5	27.6	27.5	27.4	24.7	24.6	24.4
Eggs, strictly fresh.....dozen.....	39.8	40.4	41.1	34.0	35.5	36.2	34.6	30.8	33.6	39.8	37.0	42.0
Bread.....pound.....	10.6	9.7	9.7	9.6	9.6	9.6	10.2	10.1	10.1	8.9	8.9	8.9
Flour.....do.....	6.0	5.4	5.4	5.2	4.7	4.7	5.5	4.7	4.7	5.9	5.3	5.3
Corn meal.....do.....	7.6	7.7	7.7	5.8	5.9	5.9	4.6	4.7	4.8	5.1	4.9	5.0
Rollod oats.....do.....	9.8	10.0	10.0	8.7	9.3	9.3	9.7	9.6	9.6	9.2	8.7	8.7
Corn flakes.....8-ounce package.....	10.1	9.9	9.9	9.6	9.6	9.6	10.0	9.5	9.5	9.4	9.1	9.2
Wheat cereal.....28-ounce package.....	25.3	25.3	25.1	26.8	26.8	26.8	27.9	27.5	27.3	24.7	24.2	24.2
Macaroni.....pound.....	22.8	22.8	23.1	17.6	17.7	17.8	19.0	18.9	18.5	22.9	20.5	21.9
Rice.....do.....	10.6	10.0	10.0	10.1	10.4	10.1	10.4	10.5	10.2	10.6	11.5	11.3
Beans, navy.....do.....	11.6	13.5	13.5	12.4	14.2	14.8	13.7	14.3	14.0	12.0	14.0	13.8
Potatoes.....do.....	3.5	2.0	3.0	2.1	1.9	2.2	2.7	1.7	2.1	4.2	2.3	3.0
Onions.....do.....	8.3	8.7	7.2	7.1	7.1	7.2	8.1	9.9	8.5	8.4	8.3	7.6
Cabbage.....do.....	9.1	5.9	5.2	8.3	6.8	7.2	9.6	5.5	5.5	7.9	4.9	5.0
Beans, baked.....No. 2 can.....	11.4	12.2	12.2	11.5	12.8	12.9	10.6	11.4	11.4	10.5	10.8	10.8
Corn, canned.....do.....	16.9	16.9	16.6	18.1	17.8	17.7	15.4	14.9	14.9	15.4	15.1	15.0
Peas, canned.....do.....	17.5	17.6	17.4	18.9	18.1	18.1	16.3	15.4	16.2	15.4	14.9	14.8
Tomatoes, canned.....do.....	12.1	13.6	13.8	15.8	16.3	16.9	13.6	13.8	14.4	10.5	12.2	12.2
Sugar.....pound.....	7.1	6.3	6.3	7.1	6.3	6.2	7.8	6.9	7.0	6.9	5.9	5.9
Tea.....do.....	70.3	67.0	66.1	76.1	79.1	79.3	83.8	83.5	83.8	95.0	89.6	89.2
Coffee.....do.....	50.5	50.5	50.2	51.0	52.0	51.9	52.2	51.7	51.7	47.8	47.1	46.9
Prunes.....do.....	14.5	14.8	14.8	12.2	14.3	14.4	13.9	14.7	14.9	14.2	15.3	14.5
Raisins.....do.....	13.9	11.9	11.9	13.2	10.7	10.5	13.8	11.6	11.6	13.8	12.8	12.8
Bananas.....dozen.....	32.5	31.9	31.5	29.2	10.5	10.3	28.3	28.9	29.0	28.3	27.7	29.1
Oranges.....do.....	68.6	46.4	50.0	57.0	33.3	37.8	69.2	38.0	41.4	75.2	40.9	40.2

<sup>1</sup> No. 2½ can.<sup>2</sup> Per pound.

## Comparison of Retail Food Costs in 51 Cities

TABLE 6 shows for 39 cities the percentage of increase or decrease in the retail cost of food<sup>3</sup> in May, 1929, compared with the average cost in the year 1913, in May, 1928, and April, 1929. For 12 other cities comparisons are given for the 1-year and the 1-month periods; these cities have been scheduled by the bureau at different

<sup>3</sup> For list of articles see note 1, p. 209.

dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.<sup>4</sup>

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of May, 99.4 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 44 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Baltimore, Boston, Bridgeport, Buffalo, Butte, Charleston, S. C., Chicago, Cincinnati, Cleveland, Columbus, Dallas, Denver, Detroit, Fall River, Houston, Indianapolis, Jacksonville, Kansas City, Little Rock, Los Angeles, Louisville, Manchester, Memphis, Milwaukee, Mobile, Newark, New Haven, New Orleans, New York, Norfolk, Omaha, Peoria, Portland, Me., Portland, Oreg., Providence, Rochester, St. Louis, St. Paul, Salt Lake City, Savannah, Scranton, Springfield, Ill., and Washington.

TABLE 6.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN MAY, 1929, COMPARED WITH THE COST IN APRIL, 1929, MAY, 1928, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percent- age in- crease, May, 1929, com- pared with 1913	Percent- age de- crease, May, 1929, com- pared with May, 1928	Percent- age in- crease, May, 1929, com- pared with April, 1929	City	Percent- age in- crease, May, 1929, com- pared with 1913	Percent- age de- crease, May, 1929, com- pared with May, 1928	Percent- age in- crease, May, 1929, com- pared with April, 1929
Atlanta.....	57.7	0.7	0.8	Minneapolis.....	53.9	1.4	0.5
Baltimore.....	56.8	2.1	2.1	Mobile.....		0.8	0.9
Birmingham.....	57.5	1.4	0.3	Newark.....	47.8	1.0	1.1
Boston.....	54.2	* 0.3	1.2	New Haven.....	53.0	1.1	0.7
Bridgeport.....		1.7	0.4	New Orleans.....	54.8	* 1.5	1.1
Buffalo.....	56.5	0.2	1.4	New York.....	55.6	1.3	0.4
Butte.....		2.3	2.4	Norfolk.....		0.2	1.3
Charleston, S. C.....	55.7	0.6	0.1	Omaha.....	45.3	0.8	* 1.2
Chicago.....	64.6	0.0	0.4	Peoria.....		1.9	0.5
Cincinnati.....	61.2	* 1.5	3.0	Philadelphia.....	56.4	2.5	2.5
Cleveland.....	50.9	3.1	2.3	Pittsburgh.....	56.4	* 1.9	1.9
Columbus.....		* 1.8	2.3	Portland, Me.....		1.6	1.0
Dallas.....	54.0	* 0.1	* 0.2	Portland, Oreg.....	41.9	* 3.9	2.4
Denver.....	38.1	0.5	1.3	Providence.....	53.0	0.3	1.0
Detroit.....	59.7	0.2	1.3	Richmond.....	62.4	* 0.7	2.1
Fall River.....	49.0	1.8	* 0.2	Rochester.....		0.1	2.6
Houston.....		* 2.4	0.9	St. Louis.....	60.7	* 2.6	3.0
Indianapolis.....	51.3	0.5	1.6	St. Paul.....		3.2	0.5
Jacksonville.....	40.1	0.9	0.2	Salt Lake City.....	31.3	* 1.1	0.8
Kansas City.....	49.8	1.3	0.4	San Francisco.....	49.7	* 1.5	0.6
Little Rock.....	49.4	* 0.7	1.0	Savannah.....		1.0	0.5
Los Angeles.....	43.5	* 2.7	1.5	Scranton.....	59.5	1.7	1.6
Louisville.....	56.6	* 0.2	1.9	Seattle.....	47.2	* 3.4	1.8
Manchester.....	49.3	2.1	1.2	Springfield, Ill.....		2.8	1.3
Memphis.....	48.5	* 0.6	0.7	Washington.....	62.1	0.3	2.1
Milwaukee.....	53.6	1.5	0.5				

\* Increase.

\* Decrease.

<sup>4</sup> The consumption figures used from January, 1913, to December, 1920, for each article in each city are given in the Labor Review for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month, beginning with January, 1921, are given in the Labor Review for March, 1927, p. 26.



Retail Prices of Coal in the United States <sup>5</sup>

THE following table shows the average retail prices of coal on May 15, 1928, and April 15 and May 15, 1929, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON MAY 15, 1928, AND APRIL 15 AND MAY 15, 1929

City, and kind of coal	1928	1929		City, and kind of coal	1928	1929	
	May 15	Apr. 15	May 15		May 15	Apr. 15	May 15
United States:				Cincinnati, Ohio:			
Pennsylvania anthracite—				Bituminous—			
Stove—				Prepared sizes—			
Average price	\$14.74	\$15.04	\$14.74	High volatile	\$5.60	\$5.55	\$5.50
Index (1913=100)	190.8	194.6	190.7	Low volatile	7.50	7.38	7.23
Chestnut—				Cleveland, Ohio:			
Average price	\$14.46	\$14.71	\$14.40	Pennsylvania anthracite—			
Index (1913=100)	182.7	185.8	182.0	Stove	15.00	15.10	15.05
Bituminous—				Chestnut	14.50	14.50	14.55
Average price	\$8.69	\$8.76	\$8.52	Bituminous—			
Index (1913=100)	159.9	161.3	156.8	Prepared sizes—			
Atlanta, Ga.:				High volatile	7.40	7.04	6.96
Bituminous, prepared sizes	\$7.37	\$7.33	\$7.34	Low volatile	9.00	9.03	9.00
Baltimore, Md.:				Columbus, Ohio:			
Pennsylvania anthracite—				Bituminous—			
Stove	*15.00	*16.00	13.50	Prepared sizes—			
Chestnut	*14.50	*15.50	13.00	High volatile	5.91	5.75	5.88
Bituminous, run of mine—				Low volatile	7.31	7.25	7.25
High volatile	7.89	7.93	7.75	Dallas, Tex.:			
Birmingham, Ala.:				Arkansas anthracite—Egg	15.00	15.50	13.25
Bituminous, prepared sizes	6.92	6.85	6.95	Bituminous, prepared sizes	12.10	13.08	11.83
Boston, Mass.:				Denver, Colo.:			
Pennsylvania anthracite—				Colorado anthracite—			
Stove	15.50	16.25	15.25	Furnace, 1 and 2 mixed	15.72	14.25	14.31
Chestnut	15.25	16.00	14.75	Stove, 3 and 5 mixed	15.72	13.00	13.26
Bridgeport, Conn.:				Bituminous, prepared sizes	9.56	8.96	9.20
Pennsylvania anthracite—				Detroit, Mich.:			
Stove	14.50	14.50	14.50	Pennsylvania anthracite—			
Chestnut	14.50	14.50	14.50	Stove	15.50	16.00	15.50
Buffalo, N. Y.:				Chestnut	15.00	15.50	15.00
Pennsylvania anthracite—				Bituminous—			
Stove	13.46	13.31	13.07	Prepared sizes—			
Chestnut	13.06	12.81	12.57	High volatile	8.27	8.30	8.30
Butte, Mont.:				Low volatile	10.14	10.31	9.61
Bituminous, prepared sizes	10.87	10.91	10.92	Run of mine—			
Charleston, S. C.:				Low volatile	7.67	8.00	7.88
Bituminous, prepared sizes	11.00	9.67	9.67	Fall River, Mass.:			
Chicago, Ill.:				Pennsylvania anthracite—			
Pennsylvania anthracite—				Stove	16.00	15.75	15.75
Stove	16.00	16.85	16.40	Chestnut	15.75	15.50	15.50
Chestnut	15.70	16.45	15.95	Houston, Tex.:			
Bituminous—				Bituminous, prepared sizes	11.60	12.20	12.00
Prepared sizes—				Indianapolis, Ind.:			
High volatile	7.83	8.27	7.61	Bituminous—			
Low volatile	9.85	11.85	10.10	Prepared sizes—			
Run of mine—				High volatile	6.19	6.19	6.01
Low volatile	7.53	8.25	7.50	Low volatile	7.93	8.29	7.93
				Run of mine—			
				Low volatile	6.75	6.88	6.63

\* Per ton of 2,240 pounds.

<sup>5</sup> Prices of coal were formerly secured semiannually and published in the March and September issues of the Labor Review. Since June, 1920, these prices have been secured and published monthly.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON MAY 15, 1928, AND APRIL 15 AND MAY 15, 1929—Continued

City, and kind of coal	1928	1929		City, and kind of coal	1928	1929	
	May 15	Apr. 15	May 15		May 15	Apr. 15	May 15
Jacksonville, Fla.: Bituminous, prepared sizes	\$13.00	\$12.00	\$11.00	Pittsburgh, Pa.: Pennsylvania anthracite— Chestnut	\$14.75	\$15.00	\$15.00
Kansas City, Mo.: Arkansas anthracite— Furnace	12.40	12.60	11.90	Bituminous, prepared sizes	5.29	5.25	5.25
Stove No. 4	14.17	14.17	13.17	Portland, Me.: Pennsylvania anthracite— Stove	16.32	15.84	15.84
Bituminous, prepared sizes	7.56	7.23	7.23	Chestnut	16.32	15.84	15.84
Little Rock, Ark.: Arkansas anthracite—Egg	13.50	13.50	13.50	Portland, Oreg.: Bituminous, prepared sizes	13.35	13.04	13.04
Bituminous, prepared sizes	10.15	10.20	10.05	Providence, R. I.: Pennsylvania anthracite— Stove	<sup>1</sup> 15.50	<sup>2</sup> 15.25	<sup>2</sup> 15.25
Los Angeles, Calif.: Bituminous, prepared sizes	16.50	16.50	16.50	Chestnut	<sup>1</sup> 15.50	<sup>2</sup> 15.25	<sup>2</sup> 15.25
Louisville, Ky.: Bituminous— Prepared sizes— High volatile	5.92	5.66	5.91	Richmond, Va.: Pennsylvania anthracite— Stove	13.83	15.00	14.00
Low volatile	8.50	8.00	8.50	Chestnut	13.83	15.00	14.00
Manchester, N. H.: Pennsylvania anthracite— Stove	16.25	16.00	16.00	Bituminous— Prepared sizes— High volatile	7.75	8.13	8.00
Chestnut	16.00	16.00	16.00	Low volatile	8.79	9.83	8.72
Memphis, Tenn.: Bituminous, prepared sizes	6.35	7.39	7.39	Run of mine— Low volatile	6.75	7.50	6.90
Milwaukee, Wis.: Pennsylvania anthracite— Stove	15.75	16.30	15.90	Rochester, N. Y.: Pennsylvania anthracite— Stove	14.10	14.00	14.00
Chestnut	15.45	15.90	15.45	Chestnut	13.75	13.50	13.50
Bituminous— Prepared sizes— High volatile	7.80	7.80	7.68	St. Louis, Mo.: Pennsylvania anthracite— Stove	16.35	16.80	16.20
Low volatile	10.15	11.08	10.24	Chestnut	15.95	16.50	16.00
Minneapolis, Minn.: Pennsylvania anthracite— Stove	17.75	18.28	17.86	Bituminous, prepared sizes	5.88	6.45	5.76
Chestnut	17.45	17.90	17.41	St. Paul, Minn.: Pennsylvania anthracite— Stove	17.75	18.30	17.88
Bituminous— Prepared sizes— High volatile	10.93	10.90	10.04	Chestnut	17.45	17.90	17.43
Low volatile	13.42	13.50	12.75	Bituminous— Prepared sizes— High volatile	10.68	10.68	9.65
Mobile, Ala.: Bituminous, prepared sizes	9.27	9.12	9.10	Low volatile	13.43	13.50	12.75
Newark, N. J.: Pennsylvania anthracite— Stove	13.50	13.40	13.40	Salt Lake City, Utah: Colorado anthracite— Furnace, 1 and 2 mixed	18.00	18.00	18.00
Chestnut	13.00	12.90	12.90	Stove, 3 and 5 mixed	18.00	18.00	18.00
New Haven, Conn.: Pennsylvania anthracite— Stove	14.40	14.90	14.50	Bituminous, prepared sizes	8.48	6.94	6.96
Chestnut	14.40	14.90	14.50	San Francisco, Calif.: New Mexico anthracite— Cerillos egg	25.00	26.00	25.00
New Orleans, La.: Bituminous, prepared sizes	9.25	9.29	9.14	Colorado anthracite— Egg	24.50	25.50	24.50
New York, N. Y.: Pennsylvania anthracite— Stove	14.25	13.83	13.83	Bituminous, prepared sizes	16.25	16.75	16.13
Chestnut	13.75	13.33	13.33	Savannah, Ga.: Bituminous, prepared sizes	<sup>1</sup> 10.63	<sup>2</sup> 9.54	<sup>2</sup> 9.54
Norfolk, Va.: Pennsylvania anthracite— Stove	14.00	15.00	14.00	Scranton, Pa.: Pennsylvania anthracite— Stove	10.03	10.00	10.07
Chestnut	14.00	15.00	14.00	Chestnut	9.83	9.63	9.70
Bituminous— Prepared sizes— High volatile	7.81	7.81	7.88	Seattle, Wash.: Bituminous, prepared sizes	10.14	10.55	10.36
Low volatile	9.50	10.50	9.00	Springfield, Ill.: Bituminous, prepared sizes	4.44	4.24	4.34
Run of mine— Low volatile	7.00	7.00	7.00	Washington, D. C.: Pennsylvania anthracite— Stove	<sup>1</sup> 14.86	<sup>1</sup> 14.93	<sup>1</sup> 14.98
Omaha, Nebr.: Bituminous, prepared sizes	9.08	9.51	9.49	Chestnut	<sup>1</sup> 14.49	<sup>1</sup> 14.34	<sup>1</sup> 14.48
Peoria, Ill.: Bituminous, prepared sizes	6.86	6.90	6.57	Bituminous— Prepared sizes— High volatile	<sup>1</sup> 8.63	<sup>1</sup> 8.63	<sup>1</sup> 8.63
Philadelphia, Pa.: Pennsylvania anthracite— Stove	<sup>1</sup> 13.61	<sup>1</sup> 14.00	<sup>1</sup> 14.00	Low volatile	<sup>1</sup> 10.33	<sup>1</sup> 11.00	<sup>1</sup> 11.00
Chestnut	<sup>1</sup> 13.32	<sup>1</sup> 13.50	<sup>1</sup> 13.50	Run of mine— Mixed	<sup>1</sup> 7.00	<sup>1</sup> 7.81	<sup>1</sup> 7.63

<sup>1</sup> Per ton of 2,240 pounds.

<sup>2</sup> The average price of coal delivered in bin is 50 cents higher than here shown. Practically all coal is delivered in bin.

<sup>3</sup> All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

### Comparison of Retail-Price Changes in the United States and in Foreign Countries

THE principal index numbers of retail prices published by foreign countries have been brought together with those of this bureau in the subjoined table after having been reduced, in most cases, to a common base, namely, prices for July, 1914, equal 100. This base was selected instead of the average for the year 1913, which is used in other tables of index numbers of retail prices compiled by the bureau, because of the fact that in numerous instances satisfactory information for 1913 was not available. Some of the countries shown in the table now publish index numbers of retail prices on the July, 1914, base. In such cases, therefore, the index numbers are reproduced as published. For other countries the index numbers here shown have been obtained by dividing the index for each month specified in the table by the index for July, 1914, or the nearest period thereto as published in the original sources. As stated in the table, the number of articles included in the index numbers for the different countries differs widely. These results, which are designed merely to show price trends and not actual differences in the several countries, should not, therefore, be considered as closely comparable with one another. In certain instances, also, the figures are not absolutely comparable from month to month over the entire period, owing to slight changes in the list of commodities and the localities included on successive dates.



## INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND IN OTHER COUNTRIES

Country...	United States	Canada	Belgium	Czechoslovakia	Denmark	Finland	France (except Paris)	France (Paris)	Germany
Number of localities...	51	60	59	Entire country	100	21	320	1	71
Commodities included...	43 foods	29 foods	56 (foods, etc.)	29 foods	Foods	36 foods	13 (11 foods)	13 (11 foods)	Foods
Computing agency.....	Bureau of Labor Statistics	Department of Labor	Ministry of Industry and Labor	Office of Statistics	Government Statistical Department	Central Bureau of Statistics	Ministry of Labor	Ministry of Labor	Federal Statistical Bureau
Base=100..	July, 1914	July, 1914	April, 1914	July, 1914	July, 1914	January-June, 1914	August, 1914	July, 1914	October, 1913-July, 1914
<b>1924</b>									
Jan.....	146	145	480	836	194	1089		376	127
Apr.....	138	137	498	829		1035		380	123
July.....	140	134	493	837	200	1052		360	126
Oct.....	145	139	513	877		1156		383	134
<b>1925</b>									
Jan.....	151	145	521	899	215	1130		408	137
Apr.....	148	142	506	901		1137		409	144
July.....	156	141	509	916	210	1145		421	154
Oct.....	158	147	533	875		1165		433	151
<b>1926</b>									
Jan.....	161	157	527	854	177	1090		480	143
Feb.....	158	155	526	845		1106	503	495	142
Mar.....	156	154	521	832		1100		497	141
Apr.....	159	153	529	832		1085		503	142
May.....	158	152	558	837		1078	523	522	142
June.....	156	149	579	861		1090		544	143
July.....	154	149	637	876	159	1105		574	145
Aug.....	152	150	681	878		1153	610	587	146
Sept.....	155	147	684	878		1137		590	145
Oct.....	157	147	705	888		1126		624	145
Nov.....	158	148	730	902		1114	647	628	148
Dec.....	158	151	741	912		1110		599	150
<b>1927</b>									
Jan.....	156	153	755	914	156	1092		592	151
Feb.....	153	151	770	914		1095	586	585	152
Mar.....	150	149	771	915		1086		581	151
Apr.....	150	146	774	923	152	1069		580	150
May.....	152	145	776	931		1058	572	589	151
June.....	155	146	785	949		1072		580	153
July.....	150	147	790	962	153	1102		557	157
Aug.....	149	147	787	919		1159	553	539	150
Sept.....	151	146	794	910		1146		532	151
Oct.....	153	148	804	907	152	1156		520	152
Nov.....	153	149	809	905		1175	526	500	152
Dec.....	153	151	812	913		1171		523	153
<b>1928</b>									
Jan.....	152	151	813	913	152	1126		530	152
Feb.....	148	149	811	910		1112	522	522	151
Mar.....	148	147	806	901		1123		524	151
Apr.....	149	146	807	905	152	1119		532	151
May.....	150	146	805	908		1113	530	546	151
June.....	149	145	811	928		1126		557	152
July.....	150	146	811	943	153	1155		1 111	154
Aug.....	151	149	819	943		1191	536	1 110	156
Sept.....	154	150	825	928		1174		1 111	153
Oct.....	153	152	834	907	146	1183		1 115	152
Nov.....	154	152	845	900		1194	562	1 119	152
Dec.....	152	152	852	905		1186		1 121	153
<b>1929</b>									
Jan.....	151	152	856	900	147	1156		1 122	153
Feb.....	151	150	859	911		1141		1 122	156
Mar.....	150	151	862	913		1135		1 123	159

1 In gold.

## INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND IN OTHER COUNTRIES—Continued

Country--	Italy	Nether-lands	Norway	Sweden	Switzer-land	United King-dom	South Africa	India (Bom-bay)	Aus-tralia	New Zealand
Number of localities--	47	6	31	49	33	630	9	1	30	25
Commodities in-cluded--	20 foods and charcoal	29 (27 foods)	Foods	50 (43 foods, 7 fuel and light)	Foods	21 foods	24 foods	17 foods	46 foods and groceries	59 foods
Computing agency--	Ministry of National Economy	Central Bureau of Statistics	Central Bureau of Statistics	Social Board	Labor Office (revised)	Ministry of Labor	Office of Census and Statistics	Labor Office (revised)	Bureau of Census and Statistics	Census and Statistics Office
Base=100--	1913	January-June, 1914	July, 1914	July, 1914	July, 1914	July, 1914	1914	July, 1914	July, 1914	July, 1914
1924										
Jan.....	527	150	230	163	173	175	120	154	155	150
Apr.....	527	152	240	159	169	167	122	143	150	150
July.....	538	150	248	159	170	162	117	151	148	148
Oct.....	556	154	264	172	174	172	120	156	146	145
1925										
Jan.....	609	156	277	170	172	178	120	152	148	147
Apr.....	606	155	276	170	169	170	124	153	152	149
July.....	605	152	260	169	169	167	120	152	156	151
Oct.....	645	149	228	166	168	172	119	148	157	155
1926										
Jan.....	658	148	216	162	165	171	116	151	155	154
Feb.....	649	147	212	160	163	168	117	150	154	153
Mar.....	636	147	205	159	161	165	118	151	159	152
Apr.....	633	146	198	158	161	159	119	150	163	151
May.....	643	146	195	157	159	158	119	150	163	151
June.....	647	146	194	157	159	158	118	152	162	151
July.....	645	146	198	156	159	161	117	155	159	149
Aug.....	648	146	196	156	157	161	117	153	157	150
Sept.....	656	149	193	157	158	162	117	152	155	148
Oct.....	662	148	191	157	160	163	120	153	153	147
Nov.....	655	148	186	158	159	169	119	152	155	146
Dec.....	641	146	184	157	159	169	117	154	158	149
1927										
Jan.....	629	147	180	156	158	167	116	155	158	148
Feb.....	615	146	177	153	157	164	117	152	153	146
Mar.....	610	146	173	151	156	162	118	152	151	146
Apr.....	606	145	169	151	156	155	119	151	151	145
May.....	599	145	169	150	156	154	121	150	152	145
June.....	558	145	172	151	157	154	120	151	153	145
July.....	540	144	175	151	157	159	119	154	152	144
Aug.....	532	143	175	152	157	156	118	155	155	144
Sept.....	525	143	174	156	159	157	117	151	157	143
Oct.....	530	146	173	155	159	161	119	148	159	143
Nov.....	534	148	171	155	161	163	119	147	157	144
Dec.....	534	148	171	154	160	163	119	149	155	146
1928										
Jan.....	531	148	170	153	159	162	119	151	154	147
Feb.....	529	149	170	153	158	159	118	146	152	145
Mar.....	522	150	171	154	157	155	118	142	153	145
Apr.....	522	150	171	154	156	155	119	140	154	144
May.....	529	150	172	155	156	154	120	144	154	146
June.....	533	150	171	157	156	156	118	142	154	147
July.....	516	150	173	157	157	157	116	143	152	147
Aug.....	520	150	170	156	156	156	115	142	150	147
Sept.....	526	148	164	155	157	156	115	141	150	147
Oct.....	536	148	163	153	158	157	115	142	150	149
Nov.....	555	148	161	152	158	159	115	144	150	150
Dec.....	564	148	161	151	158	160	115	145	152	152
1929										
Jan.....	565	-----	158	150	157	159	115	146	161	149
Feb.....	565	-----	157	151	157	156	115	146	161	148
Mar.....	571	-----	158	152	156	157	117	146	160	146

## Index Numbers of Wholesale Prices in May, 1929

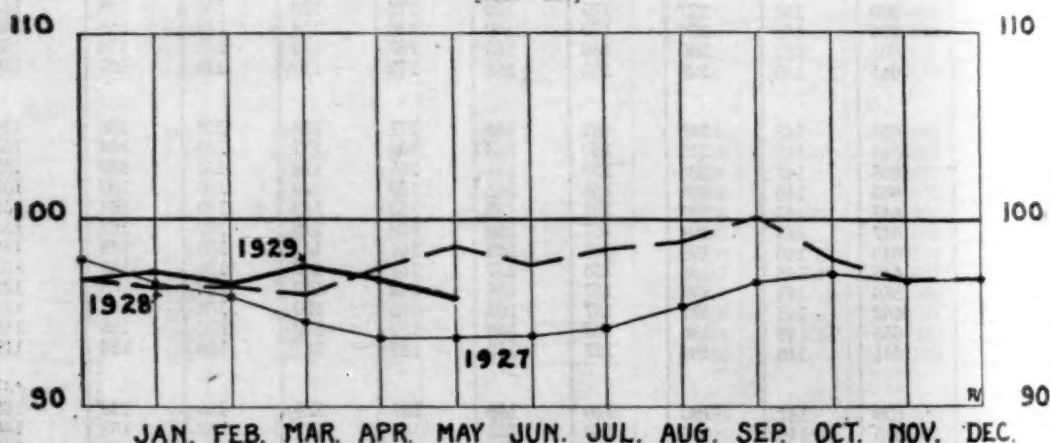
**T**HE recent downward trend of wholesale prices continued through May, according to information collected in representative markets by the Bureau of Labor Statistics of the United States Department of Labor. The bureau's weighted index number stands at 95.8 for May compared with 96.8 for April, a decrease of 1 per cent. Compared with May, 1928, with an index number of 98.6, a decrease of 2¾ per cent is shown. Based on these figures the purchasing power of the dollar in May, 1929, was 104.4 compared with 100.0 in the year 1926.

Farm products again led in price declines, with decreases reported for corn, oats, rye, wheat, beef steers and calves, hogs, sheep and lambs, cotton, hay, and wool. Some commodities, such as eggs, apples, and potatoes, on the other hand, averaged higher than in April. The net decrease in the group was over 2½ per cent.

Among foods decreases in prices of some commodities, as butter, rye and wheat flour, and corn meal, were offset by increases in others, resulting in no change in the group price level.

TREND OF WHOLESALE PRICES

[1926=100]



Hides and leather products declined in the month, as did also all textile products. Fuel and lighting materials, on the contrary, averaged somewhat higher, due to increases in petroleum products.

Iron and steel products increased slightly, while nonferrous metals again decreased sharply, causing a net decline in the group of metals and metal products.

Among building materials decreases were reported for lumber and certain metal products, while structural steel and paint materials advanced in price. No changes were reported for brick and cement.

Chemicals and drugs showed a minor decrease in the price level, while house-furnishing goods showed no change. In the group of miscellaneous commodities there were decreases in cattle feed and automobile tires, while increases took place among paper and pulp, crude rubber, and lubricating oils.

Prices of raw materials, semimanufactured articles, and finished products all averaged lower in May than in the month before. Non-agricultural commodities also, taken as a whole, were lower.



Of the 550 commodities or price series for which comparable information for April and May was collected, increases were shown in 82 instances and decreases in 178 instances. In 290 instances no change in price was reported.

Comparing prices in May with those of a year ago, as measured by changes in the index numbers it is seen that metals and metal products and building materials were appreciably higher. In all other groups prices in May were lower than a year ago, ranging from three-fourths of 1 per cent in the case of fuel and lighting materials to 15½ per cent in the case of hides and leather products.

# INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100.0]

Groups and subgroups	May, 1928	April, 1929	May, 1929	Purchasing power of the dollar, May, 1929
All commodities.....	98.6	96.8	95.8	104.4
Farm products.....	109.8	104.9	102.2	97.8
Grains.....	127.0	94.3	88.2	113.4
Livestock and poultry.....	103.9	114.7	110.0	90.9
Other farm products.....	107.9	101.8	101.7	98.3
Foods.....	101.2	97.7	97.7	102.4
Butter, cheese, and milk.....	100.1	106.1	104.3	95.9
Meats.....	103.2	111.5	111.5	89.7
Other foods.....	100.3	86.0	86.6	115.5
Hides and leather products.....	126.3	107.9	106.8	93.6
Hides and skins.....	164.5	108.2	104.7	95.5
Leather.....	130.2	111.3	110.7	90.3
Boots and shoes.....	110.5	106.6	106.2	94.2
Other leather products.....	108.4	105.0	104.9	95.3
Textile products.....	96.6	95.5	94.2	106.2
Cotton goods.....	101.3	100.2	99.7	100.3
Silk and rayon.....	84.8	82.4	80.9	123.6
Woolen and worsted goods.....	100.9	100.3	98.7	101.3
Other textile products.....	84.5	85.3	81.1	123.3
Fuel and lighting.....	81.8	80.6	81.1	123.3
Anthracite coal.....	89.8	88.1	87.4	114.4
Bituminous coal.....	92.0	89.3	89.2	112.1
Coke.....	84.1	84.7	84.7	118.1
Manufactured gas.....	94.6	93.4	(1)	
Petroleum products.....	71.2	71.1	72.5	137.9
Metals and metal products.....	98.6	106.4	105.2	95.1
Iron and steel.....	94.8	98.2	98.4	101.6
Nonferrous metals.....	92.0	113.1	104.9	95.3
Agricultural implements.....	98.8	98.8	98.3	101.7
Automobiles.....	104.7	112.2	112.2	89.1
Other metal products.....	96.9	98.5	98.5	101.5
Building materials.....	93.5	97.9	96.8	103.3
Lumber.....	88.1	95.4	94.6	105.7
Brick.....	92.7	92.4	92.4	108.2
Cement.....	96.5	94.6	94.6	105.7
Structural steel.....	95.8	97.0	99.6	100.4
Paint materials.....	85.7	85.2	85.7	116.7
Other building materials.....	103.5	109.6	106.3	94.1
Chemicals and drugs.....	95.3	94.9	94.2	106.2
Chemicals.....	100.8	100.5	99.4	100.6
Drugs and pharmaceuticals.....	70.4	70.7	70.5	141.8
Fertilizer materials.....	95.5	94.6	94.1	106.3
Fertilizers.....	97.6	96.2	96.7	103.4
House-furnishing goods.....	97.8	96.7	96.7	103.4
Furniture.....	97.8	95.0	95.0	105.3
Furnishings.....	97.8	97.8	97.8	102.2
Miscellaneous.....	85.1	79.2	79.6	125.6
Cattle feed.....	160.4	108.9	101.6	98.4
Paper and pulp.....	89.8	87.8	88.3	113.3
Rubber.....	39.0	44.0	44.9	222.7
Automobile tires.....	69.8	55.8	55.3	180.8
Other miscellaneous.....	98.8	103.8	106.6	93.8
Raw materials.....	101.4	97.0	95.3	104.9
Semimanufactured articles.....	98.6	97.4	95.1	105.2
Finished products.....	97.1	96.9	96.4	103.7
Nonagricultural commodities.....	95.6	94.7	94.1	106.3

<sup>1</sup> Data not yet available.

# COST OF LIVING

## Wages and Cost of Living in Argentina

THE wage and cost-of-living problem in the Argentine Republic is discussed in considerable detail by Dr. Alejandro E. Bunge in an article appearing in the September, 1928, issue of the *Revista de Economía Argentina*.

When the increase in the cost of living became accentuated as it did from the year 1918, demands for "adjustment" of salaries were met with increases in rates in all trades. Wage rates attained their maximum in 1921, when they showed an increase of 77 per cent over the wages of 1914. In 1921 a general fall in prices set in and this has continued almost without interruption up to now. As this fall was not so sudden as was the "deflation" in the United States in 1920-21, the necessity for a readjustment of wages in proportion to the general fall in prices was not felt. So wages remained stable and ever since then there has been a margin of advantage in wages in relation to the cost of living. This margin between wages and prices meant, for several years, the vanishing of all profit in important branches of production, for with the fall in prices of wheat, maize, meat, and other articles the profits disappeared. Since the middle of 1926 several factors representing increased efficiency in production have appeared and with them the producers' profits have reappeared. Had this not happened, production would have shrunk and at the same time the unemployment observable for some years would have increased. Under such circumstances any new increase in wages would mean a return to the crisis of production "at a loss," or would lead to a new general rise in prices—that is to say, to a decrease in the purchasing power of money and of wages.

The following tables show the index numbers of the cost of living in the city of Buenos Aires calculated by the National Statistical Department up to 1923 and by the *Revista de Economía Argentina* thereafter, and the index numbers of average wages in Buenos Aires, according to the National Labor Department:

INDEX NUMBERS OF COST OF LIVING, AND OF WAGES, IN BUENOS AIRES, 1914 TO 1926

Year	Index numbers		Year	Index numbers	
	Cost of living	Wages		Cost of living	Wages
1914.....	100	100	1921.....	166	177
1915.....	107		1922.....	139	171
1916.....	115		1923.....	136	
1917.....	135		1924.....	139	
1918.....	169	105	1925.....	135	
1919.....	160	133	1926.....	133	175
1920.....	186	162			

In order to obtain the total index numbers of the cost of living the following partial indexes were established for food, rent, clothing, and other expenses, in the following proportion:

From 1914 to 1918:	Per cent	From 1919 to 1926:	Per cent
Food.....	50	Food.....	50
Rent.....	20	Rent.....	26
Clothing, light, etc.....	30	Clothing, light, etc.....	24

The index numbers for food, rent, clothing and other expenses for the years 1914 to 1926 were as follows:

INDEX NUMBERS FOR FOOD, RENT, CLOTHING, AND OTHER EXPENSES IN BUENOS AIRES, 1914 TO 1926

Year	Food	Rent	Clothing and other expenses	Total cost	Year	Food	Rent	Clothing and other expenses	Total cost
1914.....	100	100	100	100	1921.....	142	149	233	166
1915.....	108	93	114	107	1922.....	109	149	193	139
1916.....	108	87	145	115	1923.....	106	149	186	136
1917.....	127	89	178	135	1924.....	109	149	189	139
1918.....	132	116	265	169	1925.....	109	144	179	135
1919.....	141	115	250	160	1926.....	116	134	168	133
1920.....	163	150	273	186					

The National Statistical Department stated that as wage fluctuations were almost identical all over the country, the index number for Buenos Aires can be taken as the general index of the fluctuations in the wages of male workers over 16 years of age throughout the Republic, taken as a whole.

The following index numbers show how real wages varied during the period, 1914 to 1926:

Year	Index No.	Year	Index No.
1914.....	100	1921.....	106
1918.....	62	1922.....	123
1919.....	83	1926.....	132
1920.....	87		



# IMMIGRATION AND EMIGRATION

## Statistics of Immigration for April, 1929

By J. J. KUNNA, CHIEF STATISTICIAN UNITED STATES BUREAU OF IMMIGRATION

**I**N APRIL, 1929, aliens admitted to the United States numbered 47,631; these included 28,565 immigrants and 19,066 nonimmigrants. Aliens leaving during that month numbered 15,120, over three-fourths (11,733) of whom were nonemigrants going abroad for a short stay or leaving after a visit in this country. The remaining 3,387 were emigrants departing for permanent residence in some foreign country. In the same month 32,288 American citizens returned to the United States and 25,277 departed for foreign shores.

Of the 28,565 immigrant aliens admitted in April, 5,373 came from Germany, 2,749 from Great Britain, 2,535 from Denmark, Norway, and Sweden, and 2,364 from the Irish Free State. Nearly two-thirds of the month's immigration from overseas came from these six countries. In the same month the other European countries supplied 5,562 immigrants and Asia, Africa, Australia, and the Pacific Islands sent 396. The Western Hemisphere contributed 9,586 immigrants this month, 5,914 coming from Canada, 2,432 from Mexico, 546 from Central and South America, 470 from the West Indies, and 224 from Newfoundland and other America.

The principal races among the April immigrants were the German (6,248), Irish (3,735), English (3,055), Scandinavian—Norwegians, Danes, and Swedes, (2,717), Scotch (2,346), Mexican (2,287), French (1,726) Italian (1,664), and Hebrew (1,424). The other races contributed less than 1,000 each. In the corresponding month a year ago, the Mexican race led the list with 6,356, or nearly three times its number for April, 1929, when it stood sixth in the list. The Mexicans, however, led the list among the outgoing aliens, comprising 718, or over one-fifth of the total emigrant aliens for the month of April, 1929.

INWARD AND OUTWARD PASSENGER MOVEMENT FROM JULY 1, 1928, TO APRIL 31, 1929

Period	Inward					Aliens de- barred from enter- ing <sup>1</sup>	Outward					Aliens de- ported after land- ing <sup>2</sup>
	Aliens admitted			United States citizens arrived	Total		Aliens departed			United States citizens de- parted	Total	
	Immi- grant	Non- immi- grant	Total				Emi- grant	Non- emi- grant	Total			
1928												
July-December	147, 707	110, 483	258, 190	268, 338	526, 528	9, 105	44, 677	104, 746	149, 423	243, 087	392, 510	5, 651
1929												
January .....	17, 806	10, 440	28, 246	23, 450	51, 696	1, 870	4, 670	10, 938	15, 608	28, 808	44, 416	1, 019
February .....	17, 254	10, 608	27, 862	33, 216	61, 078	1, 461	4, 154	10, 358	14, 512	32, 347	46, 859	1, 036
March .....	20, 145	13, 493	33, 638	37, 375	71, 013	1, 464	2, 449	6, 917	9, 366	27, 972	37, 338	1, 352
April .....	28, 565	19, 066	47, 631	32, 288	79, 919	1, 416	3, 387	11, 733	15, 120	25, 277	40, 397	1, 261
Total ....	231, 477	164, 090	395, 567	394, 667	790, 234	15, 316	59, 337	144, 692	204, 029	357, 491	561, 520	10, 319

<sup>1</sup> These aliens are not included among arrivals, as they were not permitted to enter the United States.

<sup>2</sup> These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

### Effect of Restrictive Legislation Upon Immigrants from Yugoslavia

ACCORDING to a report of the Yugoslavian Ministry of Social Affairs<sup>1</sup> the Yugoslav emigrants formerly came to the United States with a view to remaining here for a number of years and then returning to their home country, with their savings. This attitude and purpose remained unchanged also in the first few years after the Great War. But the restrictive quota law has wrought a thorough change in their minds by inducing them to remain here permanently, and accordingly to stabilize their existence here in every respect. The change took place first with the Slovenians, then the Croats, and then the Serbs. They began to buy farms and real estate and to establish handicraft shops, in which they increased their invested capital from \$1,000,000 to \$5,000,000. Formerly they did not care much for learning English, but now they take up the study of English in earnest. While formerly they were, as a rule, employed in unskilled trades, now they are learning skilled trades in order to establish themselves in better-paid occupations.

The desire to return to their home country some day still remains, but it is seldom carried out, for the general conditions in their old country are rather discouraging.

The Yugoslavs are distributed throughout the United States. Of 1,209 Yugoslav immigrants who came in 1926, 255 settled in Pennsylvania, particularly about mines in Pittsburgh and Bethlehem; 224 went to Ohio, chiefly to Cleveland; there were also currents to Akron and Youngstown; 188 remained in New York; 171 went to Illinois, mainly to Chicago; 111 settled in Michigan, chiefly in Detroit, as automobile factory workers, and in Calumet as copper-mine laborers; 55 found homes in Wisconsin; 50 settled in California; 30 in Minnesota; and 32 in Indiana.

The immigration officer reports, further, that what can be observed in regard to other races is to be observed also in regard to Yugoslavs. Many of them can not find occupations for which they were qualified in their home country, skillful workers and persons belonging to learned professions there having to do the work of common hands here. A judge, for instance, who served several years at the Yugoslav law courts "washed vessels" in restaurants and did domestic service and an engineer worked as handy man at construction works, etc.

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### Immigration to Canada, 1928-29

OF THE 167,722<sup>2</sup> immigrants to Canada in the fiscal year ending March 31, 1929, 58,880<sup>1</sup> were British, 30,560 were from the United States, and 78,282 from other countries. In the preceding year the record was 151,597 immigrants, of whom 50,872 were British, 25,007 were from the United States, and 75,718 from other countries. During the fiscal year 1928-29 the number of Canadians who returned

<sup>1</sup> Chamber of Labor for Croatia and Slavonia. *Quarterly Review of Yugoslav Migration*, January-March, 1929, Zagreb, Croatia.

<sup>2</sup> Includes 8,449 who came under the special harvester movement; 6,445 of them returning later to the British Isles.

from the United States was 33,798, a reduction of 6,089 as compared with the previous 12-month period. The above information and the following table are taken from the Canadian Labor Gazette of May, 1929:

IMMIGRATION TO CANADA, YEAR ENDING MARCH 31, 1929, BY SEX, OCCUPATION, AND DESTINATION

Sex, occupation, and destination	Via ocean ports	From United States	Total	Sex, occupation, and destination	Via ocean ports	From United States	Total
<i>Sex</i>				<i>Occupation—Continued</i>			
Adult males.....	79,417	15,444	94,861	Mining class:			
Adult females.....	33,020	7,342	40,362	Males.....	510	193	703
Children under 18.....	24,725	7,774	32,499	Females.....	86	30	116
Total.....	137,162	30,560	167,722	Children.....	104	32	136
<i>Occupation</i>				Female domesticservants.....	15,615	626	16,241
Farming class:				Other classes:			
Males.....	67,509	5,519	73,028	Males.....	1,304	1,435	2,739
Females.....	4,796	1,313	6,109	Females.....	9,598	3,462	13,060
Children.....	11,859	2,208	14,067	Children.....	10,174	4,147	14,321
Laboring class:				<i>Destination</i>			
Males.....	3,860	2,181	6,041	Nova Scotia.....	1,635	193	1,828
Females.....	689	306	995	New Brunswick.....	1,588	518	2,106
Children.....	1,214	357	1,571	Prince Edward Island.....	79	50	129
Mechanics:				Quebec.....	14,074	4,585	18,659
Males.....	4,013	3,956	7,969	Ontario.....	35,192	12,464	47,656
Females.....	1,272	757	2,029	Manitoba.....	56,299	1,352	57,651
Children.....	873	577	1,450	Saskatchewan.....	11,328	3,461	14,789
Trading class:				Alberta.....	10,926	5,317	16,243
Males.....	2,221	2,160	4,381	British Columbia.....	6,036	2,591	8,627
Females.....	964	848	1,812	Yukon Territory.....	3	22	25
Children.....	501	453	954	Northwest territories.....	1	—	1
				Not given.....	1	7	8



## BIBLIOGRAPHY

### THE OLDER WORKER IN INDUSTRY: LIST OF REFERENCES

Compiled by LAURA A. THOMPSON, LIBRARIAN, U. S. DEPARTMENT OF LABOR

**"ACTION" MEMBERSHIP CORPORATION, INC., New York.**

Certificate of incorporation of "Action." [New York, 1927.] 8 pp.

An organization for the improvement of conditions of the older unemployed. Includes among its purposes efforts to induce employers to cease discrimination against older employees or older applicants for employment. For an account of its origin and work see *Literary Digest*, Sept. 10, 1927, p. 9.

**"AD" FOR MAN OVER 35 GETS 625 ANSWERS.**

*Christian Science Monitor*, May 24, 1929, p. 4.

Analysis of answers received by a financial institution in New York advertising for a "reception man, aged 35-45."

**AGE LIMITS AND PHYSICAL EXAMINATION OF EMPLOYEES.**

*Journal of Electricity*, Apr. 1, 1925, v. 54, pp. 237-240.

Investigation made by a subcommittee of the "Tacoma Foremen's Conference" of the advisability of establishing a standard practice in regard to age limits of new employees in the various departments of the Puget Sound Power & Light Co. Recommended age limits for new employees of 21 to 35 for inexperienced and 21 to 45 for experienced men with exceptions for special or part-time work. The recommendations would make a standard physical examination a condition of employment in all departments of the company.

**AMERICAN FEDERATION OF LABOR.**

*Weekly News Service*.

Contains brief notices of nation-wide survey of age limits on employment authorized by the Council of the American Federation of Labor at the Miami, Florida, meeting in February, 1929. See particularly issues of Feb. 23 and Mar. 16, 1929. According to the Survey of Apr. 15, 1929, the Federation has sent out letters to all the State and city central labor bodies asking for "the names of companies refusing to employ workers past a specific age limit, together with such detailed information as will help us to develop a constructive policy to meet the situation."

**AMIDON, BEULAH.**

Help wanted: female.

*New Republic*, June 19, 1929, v. 59, pp. 121, 122.

**ARMSTRONG, A. W.**

Jobs for the middle-aged.

*Saturday Evening Post*, June 23, 1928, v. 200, pp. 57-60.

**ATWOOD, ALBERT W.**

Financial problem of old age.

*Saturday Evening Post*, Mar. 26, 1927, pp. 12, 13.

Includes section on "Industry's dead line."

**BOYD, CHARLES J.**

Some of the problems of the middle-aged man—his chances of securing employment.

(In U. S. Bureau of Labor Statistics Bul. No. 478, pp. 19-21.)

Address before the Fifteenth Annual Meeting of the International Association of Public Employment Offices, Detroit, Oct. 25-28, 1927. By the general superintendent of the Illinois Free Employment Offices, Chicago.

**CALIFORNIA. State Department of Social Welfare.**

Old-age dependency; a study of the care given to needy aged in California. [Sacramento, 1928] 64 pp.

The chapter on "The Employment Problem of the Aged" (pp. 40, 41) makes mention of a survey being made under a private research fund of conditions affecting employment of middle-aged workers in San Francisco.

**CAMPBELL, CLAUDE.**

Why your middle-aged men quit work.

*Industrial Management*, February, 1923, v. 65, pp. 117, 120.

CAREY, L. J.

Safe occupations for the aged worker.

National Safety News, April, 1926, v. 13, No. 4, p. 21.

By the general counsel of the Michigan Mutual Liability Co., Detroit, Mich. View expressed is that it is financially profitable to retain the old employees, to capitalize their superior knowledge of product and processes, their dependability and exemplary industry, and their sane viewpoint of labor relations. The accident rate for older workers is heavy largely because employed at the wrong kind of work. Article includes list of dangerous jobs for the man over 50 and 60 and gives a list of suitable jobs to which the skilled and unskilled aged workers can be shifted.

CLARK, WILLIAM IRVING.

Old workers in industry remain in good health. By W. I. Clark ... and E. B. Simmons.

Nation's Health, December, 1925, v. 7, pp. 812-814.

Reprinted in Industry (Associated Industries of Massachusetts), July 24, 1926, v. 17, No. 21, pp. 1-4.

Gives results of investigation of working ability as well as physical condition of 36 men, 65 years or over, employed at the Norton Co. Worcester, Mass. (abrasive manufacturing establishment). Upholds the value of retaining them in industry. The experience of this concern is that the proportion of men in the factory able to continue work after 60 over those not able to work is over two to one. Summarized in Monthly Labor Review, March, 1926, v. 22, pp. 673, 674.

— The fate of old employees.

Journal of Industrial Hygiene, January, 1929, v. 11, pp. 1-5.

Brings up to 1928 investigation of workers 65 years and over and pensioners at the Norton Co. noted above. The conclusions reached by Dr. Clark are: (1) While pensions are necessary they are satisfactory neither to the worker nor to the company and should be postponed as long as possible; (2) Through medical supervision and careful placement older workers may be kept at work which is of value to them and to the company; (3) The physical condition of a group of workers 65 years or over varies little from year to year; (4) Careful medical supervision between the years 50 and 65 should reduce the number of workers ultimately placed on the pension list.

CONFERENCE ON UNEMPLOYMENT, Washington, D. C., 1921. Committee on recent economic changes.

Recent Economic Changes in the United States. Report of the committee

\* \* \* including the reports of a special staff of the National Bureau of Economic Research, Inc. New York, McGraw-Hill Book Co., 1929. 2 v.

"Little evidence can be gathered from the field as to the age at which workers are being retired. There seem to be more jobs on which the vigor of youth is demanded and fewer on which the sort of skill is needed which would increase with age. Yet, in examining individual cases, there is seen to be still a considerable amount of work fit for older men. On the whole, it seems likely that during depressions there would now be a somewhat larger number of men over 55 and a smaller number of the younger men laid off from factories than in days before the war." (Chapter on Management, by H. S. Dennison, v. 2, p. 522. See also p. 527.)

DAVIS, JAMES J.

Machinery—menace or boon?

Mooseheart Magazine, February, 1929, v. 15, No. 2, pp. 6, 7.

The Secretary of Labor urges progressive employers to give special consideration to the problem of the worker 40 years and over on the ground that the older men are in most instances as good physically as younger workers and are more stable. Less need to discharge the older men than formerly because the new machinery performs the heaviest physical work.

— Old age at fifty.

North American Review, May, 1928, v. 225, pp. 513-520.

Reprinted in Monthly Labor Review, June, 1928, v. 26, pp. 1095-1100.

The practice of setting an arbitrary age limit for employment is antisocial and unsound. In occupations requiring youthful strength there may have been some justification for this practice in former years. Now with industry highly mechanized, skill and experience are more valuable in a worker than brute strength. "Where machines do so much and the worker so little, the worker at 60 becomes as able as the one of 20, with the added value of a tendency to stick to the job."

— Past industry's deadline. Secretary Davis discusses problem of employment from the standpoint of older men.

Washington Sunday Star, Apr. 21, 1929.

— Puddler to be displaced by new process for making iron. Opportunity opened for continued service of older workmen.

United States Daily, Feb. 12, 1929, pp. 1, 2.

Text of address at ceremonies at breaking ground for new wrought-iron mills of A. M. Byers Co., Ambridge, Pa.

DEUTE, A. H.

Is the salesman over forty a "has been."

Printers' Ink, Aug. 27, 1925, v. 132, pp. 41, 42+.

DUBLIN, LOUIS I.

Health and Wealth; A survey of the economics of world health. New York, Harper & Bros., 1928. 361 pp.

In the opinion of Dr. Dublin (statistician for the Metropolitan Life Insurance Co.), "There is no logical reason why the increased use of machinery, which requires no severe physical strain to operate, should not lengthen, rather than shorten, the active working period of life. . . . Nevertheless, there is to-day in all lines of work, clerical as well as manual labor, a very widespread and intense prejudice against the employment of older workers. This problem has now reached the acute state. . . . Probably there is no greater tragedy in modern life than this forced retirement of workers still in the prime of life—and the waste for society in general is too obvious to require comment. Undoubtedly the increasing tendency of firms to provide pensions for aged workers is an important factor in the situation. It would seem the part of wisdom to devise some kind of a pension plan which, based upon sound actuarial calculations, could nevertheless make some arrangements whereby the older worker would not be scrapped just because he has passed a certain birthday, provided he still has his health and skill." (Chapter on "The Problem of Old Age," pp. 161, 162.)

EPSTEIN, ABRAHAM.

The Challenge of the Aged. New York, The Vanguard Press, 1928. 435 pp.

"Waning earning power," pp. 63-65.

— You after fifty.

Forum, February, 1928, v. 79, pp. 264-270.

FISH, E. H.

Preparing employees to keep jobs in old age.

Management and Administration, February, 1924, v. 7, p. 204.

FORD, HENRY.

When is a man old? An interview with Henry Ford, by Samuel Crowther. Ladies' Home Journal, July, 1929, pp. 25, 132-133.

Industry needs the older experienced man, according to Mr. Ford who expresses a preference for a working force between 35 and 60 years old. Fitness should be the only test.

FREY, JOHN P.

Middle-age labor is "waste" problem.

Weekly News Service (American Federation of Labor), Mar. 16, 1929.

"To eliminate all waste in material things and throw away the productive capacity of hundreds of thousands of middle-age workers is the antithesis of scientific methods in industry. In many respects the semiskilled and skilled worker is more valuable at middle age than at any other period of his life. What may be lost in muscular resiliency is more than made up by knowledge and skill."

GILBRETH, LILLIAN M.

Scrapped at forty.

Survey, July 1, 1929, v. 52, pp. 402, 403.

Calendar age is a dubious measure of a man's or a woman's fitness to carry on in the job, in the opinion of this consulting engineer in scientific management. Great need is for job analysis and personality analysis which will, it is believed, show that the new trend in industry against the older worker is not good business.

GREEN, WILLIAM.

Labor will resist ban on 40-year men.

Weekly News Service (American Federation of Labor), Feb. 23, 1929.

"To draw the dead line of employment when a man is 40 or 45 years old is folly. Most men are in their prime at this age. They have acquired a mental balance and a rounded knowledge that equips them for service." See also statement reported in Christian Science Monitor, Feb. 19, 1929, p. 16.

INDUSTRIAL RELATIONS COUNSELORS, INC., New York.

Pensions for industrial and business employees. New York, 1928-29. 3 v. Mimeographed.

For maximum hiring age limits found in pension plans covered by this investigation see v. 1, p. 21, and v. 3, pp. 9, 10.

KING, P. J.

After you pass forty-five?

Machinists Monthly Journal, April, 1928, v. 40, pp. 211-215.

KISER, S. E.

Is it wise to mark an age limit?

Printers' Ink, Feb. 5, 1920, v. 110, pp. 129, 130+.

LAIRD, DONALD A.

Through at thirty, or just arriving at sixty.

Forbes, July 1, 1928, v. 22, p. 18.



LAPP, JOHN A.

*Justice First.* New York, Century Co., 1928. 185 pp.

The chapter on "Old Age Security" (pp. 73-82) discusses briefly the decreasing opportunities for men over 45 to secure or retain positions in industry.

LEISERSON, WILLIAM M.

*Unemployment, 1929.*

Survey, Apr. 1, 1929, v. 62, pp. 9, 10, 77.

This writer states that in looking over the employment records of a large plant in the Middle West he found that in two years not a single employee over 45 was hired, and except for a few weeks the maximum age of those hired was less than 30 years. Record of discharges and lay-off heavily weighted with older people.

LOBSENZ, JOHANNA.

*The Older Woman in Industry.* New York, Scribner, 1929. 281 pp.

A study of the difficulties of woman workers over 35 years in finding employment in New York City. The term industry has been stretched to embrace clerical and general office work, domestic work, and selling. Reviewed in *American Labor Legislation Review*, June, 1929, p. 178; *Social Service Review*, June, 1929, pp. 327, 328.

MASSACHUSETTS. *Commission on Pensions.*

*Report on Old-age Pensions.* Boston, 1925. 280 pp. (General court, S. Doc. No. 5.)

The chapter on "The Condition of Persons 65 Years of Age and Over not Dependent on Organized Charity" includes material on ability to work and earning power. See also "Analysis of Massachusetts Material" by E. S. Cogswell in National Civic Federation's report on "The Extent of Old Age Dependency," 1928, pp. 110-121.

MIDDLE-AGED PERSONS ARE BARRED FROM WORK.

Weekly News Service (American Federation of Labor), June 8, 1929.

News item stating that the records of an employment bureau in New York City showed only 200 middle-aged persons out of 5,800 applications found employment in 18 months. Costs of group insurance and workmen's compensation given as important factors in keeping the older worker from finding a job.

MODLIN, GEORGE M.

*Who shall support the aged worker?*

*Forbes*, Apr. 1, 1929, v. 23, No. 7, pp. 35-38.

Problem of the aged worker attracting more urgent attention because of the decline in the number 65 years of age and over who are gainfully employed and the difficulties of the older unemployed workers in securing jobs.

NATIONAL ASSOCIATION OF MANUFACTURERS.

[Age limit on employment by American manufacturers.] 2 leaves. Mimeographed.

Press release of Mar. 21, 1929, giving preliminary analysis of survey among members of the National Association of Manufacturers. Shows 30 per cent of the manufacturing plants have hiring-age limits ranging from 25 to 70 years for unskilled and semiskilled workers and 35 to 70 years for skilled. The most frequent limits were 45 years for unskilled and semiskilled and 50 for skilled. Of those having limits 25 per cent set the limit below 45 years for unskilled and 18 per cent for skilled workers. Some of the reasons given were physical condition of workers, the character of the work, tendency of older employees to slow up, industrial pension plans, group life insurance plans, higher cost of workmen's compensation.

Printed in *Monthly Labor Review*, May, 1929, pp. 110, 111; also in *New York Times*, Mar. 21, 1929, and other newspapers of same date.

NATIONAL CIVIC FEDERATION. *Industrial welfare department.*

*Extent of Old Age Dependency.* Report ... upon the economic and physical status of persons 65 years of age and over in New York, New Jersey, Pennsylvania, and Connecticut. New York, 1928. 158 pp.

Includes table (p. 56) on Length of service, with present firm, of men interviewed 65 years of age and over employed in industry and commerce; also "Analysis of Massachusetts material," pp. 110-121.

NATIONAL CONFERENCE ON OLD AGE SECURITY, 2d, *New York City*, 1929.

*Old Age Security.* Report of the proceedings of the second national conference on old age security held in New York City, [Apr. 26, 1929.] New York city, 1929. 87 pp.

Hiring-age limits in industry have made the problem of old-age security much more acute according to F. A. Miller (p. 24), John A. Ryan (pp. 45, 46); Frank Fitch (p. 61); Frances Perkins (p. 81). Private pensions plans blamed by E. Spahr (p. 28).

NATIONAL INDUSTRIAL CONFERENCE BOARD.

*Industrial Pensions in the United States.* New York, National Industrial Conference Board, 1925. 157 pp.

In the section on maximum hiring age (pp. 72-74) it is stated that "Nearly one-half of all the plans studied expressly fix an age limit for persons entering into the employ of a concern for the

first time. Such an age limit serves several uses, one of which is to permit a sufficient period of service before superannuation. Another is that of relieving the pension fund of extraordinary demands upon it. By enforcing a relatively low hiring age an employer is able to keep down to a certain extent the average age level of his active force and, consequently, the number of applicants for retirement pensions in any given year." Age limits found for men ranged from 30 to 64 years with 45 the most frequent age. Lower limits for woman workers fixed in many of the plans.

— **Industrial and State pensions.** (*In its Service Letter on Industrial Relations*, June 5, 1929, pp. 1-3.)

Includes brief discussion of industrial pensions in relation to the taking on of mature workers. While comparatively few companies in lines other than those in which physical requirements are very exacting have gone on record as definitely refusing employment to persons over 40 or 45 years of age, the article states that "there is unquestionably a decided preference in most establishments for younger employees, and this is not uncommonly carried to the point of a tacit understanding in the employment department that applicants over a specified age are not ordinarily desired." Suggests the need of some system of transferable credits for service, whereby at his retirement a worker may become eligible to a pension earned by service in perhaps several establishments and mentions some developments in this direction. Reprinted in *Industry* (Associated Industries of Massachusetts), June 22, 1929, pp. 1-3.

**NATIONAL METAL TRADES ASSOCIATION. Committee on industrial relations.**

A study of employee pension plans, by committee on industrial relations, National Metal Trades Association. . . . Chicago, Ill., c1927. 16 pp.

"Some employers operating pension plans require also that new employees, to be eligible, must be hired below a fixed age. This maximum hiring age varies from 30 to 64 years, 45 being preferred" (p. 11).

**NOT WANTED—MEN OVER FORTY.**

*American Labor Legislation Review*, June, 1929, v. 19, p. 179.

**OLDER WORKERS INCREASE OUTPUT IN PLANT BY STABILITY OF EFFORT.**

*Christian Science Monitor*, May 21, 1929, p. 7.

Interview with Edmund Jumonville of Squeez-Ezy Mop Co. of New Orleans, Louisiana, whose work force has been largely recruited from older workers.

**PENNSYLVANIA. Department of Labor and Industry. Bureau of employment.**

The firms listed herein do not bar men from employment on account of age. Harrisburg, Pa., 1928. 29 pp.

Issued in connection with a campaign conducted by the bureau of employment of the Pennsylvania Department of Labor and Industry which has secured the registration of about 2,000 firms that will not bar men from employment on account of age when they are "physically and mentally able to meet the requirements of the position for which their services may be required."

Brief news note in *Monthly Labor Review*, December, 1928, v. 27, p. 1167.

— **Old-age Pension Commission.**

**The Problem of Old-age Pensions in Industry.** An up-to-date summary of the facts and figures developed in the further study of old-age pensions, 1926. Prepared by Abraham Epstein, research director. Harrisburg, Pa., 1926. 126 pp.

Chapter III, on "The General Provisions of Industrial Pensions" (pp. 71-87), includes a statement regarding hiring-age limits. See also p. 6 on "Length of Service."

**REVOLT OF THE JOBLESS MIDDLE-AGED.**

*Literary Digest*, Sept. 10, 1927, v. 94, No. 11, p. 9.

Includes quotations from the daily press.

**RYAN, JOHN A.**

Our obligations to the dependent aged.

(*In Second National Conference on Old Age Security*, 1929, pp. 41-47.)

"There is something wrong with the whole conception which leads society to say that no man will be hired by a new employer after he is forty-five, which I believe is the case in a good many concerns, and that after a man is fifty, his chance of hanging on where he has employment is very slim."

**SCHAUFFLER, BENNET F.**

Preretirement disposition of old employees. New York, American Management Association, 1926. 12 pp. (American Management Association. Annual convention series, No. 49.)

**SCOTT, F. L.**

What is the older man's place on the sales force?

*Printers' Ink*, June 19, 1924, v. 127, pp. 33, 34.

**SHALL WE STARVE MEN OVER 40?**

*Literary Digest*, Mar. 9, 1929, v. 100, p. 10.

Includes quotations from statement of William Green on the plans of the American Federation of Labor to make a nation-wide survey of the extent of the practice of fixing 40 or 45 years as the age limit for employment; also comments from the daily press on the problems of the middle-aged worker.

SMITH, A. J.

Long-service staff; value of the trained man in industry.

Cassier's Industrial Management (London), December, 1926, v. 13, pp. 497, 498.

SOCIAL SCIENCE RESEARCH COUNCIL. *Advisory Committee on Industrial Relations.* A survey of research in the field of industrial relations, Herman Feldman, investigator. New York, 1928. 159 pp. Mimeographed.

The section on "The older worker in industry" (pp. 135-141) includes quotations from various authorities on the gravity of this problem and the need of giving it serious study. Suggests nine questions as deserving of investigation.

STATISTICAL ANALYSIS OF THE PERSONNEL OF A SILK MILL [Cheney Bros.]

Monthly Labor Review, March, 1927, v. 24, pp. 495-498.

Includes statistics on age distribution, length of service. Thirty-two per cent were 40 years and over.

TAKING CARE OF THE OLD MEN.

American Machinist, Dec. 30, 1926, v. 65, p. 1068; Apr. 7, 1927, v. 66, pp. 589, 590.

THE OLDER WORKER. EXPERIENCES IN A FEW TRADES.

American Federationist, July, 1929, v. 36, pp. 803-811.

Brief articles covering glass bottle blowers, pressmen, machinists, maintenance of way employees, and textile workers.

TOO OLD AT FORTY.

Saturday Review, May 16, 1925, v. 139, pp. 518, 519.

UNITED STATES. Congress. Senate. Committee on Education and Labor.

Unemployment in the United States. Hearing before the Committee . . . pursuant to S. Res. 219. Washington, 1929. xvii, 517 pp.

The testimony of several witnesses touches briefly on the problem of the older worker in industry. See particularly statements of Henry S. Dennison (pp. 13-15); William Green (p. 63); A. C. Bennett (pp. 71-74); James T. Loree (p. 113); J. M. Larkin (p. 128); Bryce M. Stewart (p. 149); and memorandum of Isadore Lubin (p. 516). The hiring age limits given were 50 years for Packard Motor Car Co., 40 years for Delaware & Hudson Co., and 45 years for Bethlehem Steel. Attention was called to the fact that these age limits for new employees tended to protect the permanent older employees within the concerns from competition in the limited jobs available for older workers to do. Need of developing a sense of responsibility among employers so that ways will be devised for retaining their older employees on the pay rolls was also suggested in the testimony.

WAGNER, H. A.

Out-witting the deadline at forty.

Professional Engineer, September, 1928, v. 13, pp. 5, 6.

WISCONSIN. *Industrial Commission.*

Employees' length of service.

Wisconsin Labor Market, February, 1928, pp. 5-20.

Statistics cover 407 manufacturing establishments employing 81,080 people.

WOOD, FRANK E.

What effect has so-called age limit on employment?

(In U. S. Bureau of Labor Statistics Bul. No. 480, pp. 63-66.)

Address by the Commissioner of Labor of Louisiana before the 15th annual convention of the Association of Governmental Officials in Industry of United States and Canada, New Orleans, May 21-25, 1928. Discusses the serious employment situation which is being created by the extension to other employing interests of the age limit for some years applied to transportation workers. View expressed is that, with occasional exceptions, the matured worker, both men and women, so long as they are physically fit, "are better capacitated to perform their respective duties than others younger in years who lack experience. . . . The average worker who has reached the age of 40 or 50 is surrounded by certain conditions in life that make him all the more careful in the performance of duty and by service has established that spirit of cooperation and loyalty that is so essential to the welfare of both the employers and employees."

YOUNG MEN WANTED? IS THIS JUST A MYTH?

Survey, Apr. 15, 1929, v. 62, pp. 107, 108.

Comment on the survey of the National Association of Manufacturers as to maximum hiring-age limit among its membership and of the nation-wide survey being undertaken by the American Federation of Labor.

ZIEHR, HENRY J.

The human scrap heap.

Railway Post Office, May, 1929, p. 13.

Reprinted in Congressional Record (Senator Robert F. Wagner), June 4, 1929, Appendix, pp. 2421, 2422.

Calls attention to the discrepancy in age limits being fixed in industry and the retirement age of postal clerks and other Government employees.



## DIRECTORIES

### Labor Offices in United States and Foreign Countries

(Bureaus of labor, employment offices, industrial commissions, State workmen's compensation insurance funds, workmen's compensation commissions, minimum wage boards, factory inspection bureaus, and arbitration and conciliation boards)

#### United States

##### Department of Labor:

Hon. James J. Davis, Secretary.

Hon. Robt Carl White, Assistant Secretary.

Hon. W. W. Husband, Second Assistant Secretary.

Bureau of Labor Statistics—Ethelbert Stewart, commissioner.

Bureau of Immigration—Harry E. Hull, commissioner general.

Bureau of Naturalization—Raymond F. Crist, commissioner.

Children's Bureau—Miss Grace Abbott, chief. Address: Twentieth and D Streets NW., Washington, D. C.

Employment Service—Francis I. Jones, director general. Address: 1800 D Street NW., Washington, D. C.

Conciliation Service—Hugh L. Kerwin, director.

Women's Bureau—Miss Mary Anderson, director. Address: Twentieth and D Streets NW., Washington, D. C.

United States Housing Corporation—Lulah T. Andrews. Address: 200 New Jersey Avenue NW., Washington, D. C.

Address of all bureaus, except where otherwise noted: 1712 G Street NW., Washington, D. C.

##### United States Employees' Compensation Commission:

Mrs. Bessie P. Brueggeman, chairman.

Harry Bassett, commissioner.

John M. Morin, commissioner.

Address of commission: Investment Building, Washington, D. C.

##### Board of Mediation:

Samuel E. Winslow.

G. Wallace W. Hanger.

Edwin C. Morrow.

Oscar B. Colquitt.

John Williams.

Address of board: Earle Building, Washington, D. C.

#### Alabama

Child welfare commission: Bibb Graves, ex officio chairman, governor.

Child welfare department—Mrs. A. M. Tunstall, director and State child labor inspector.

Address of commission: Montgomery.

Workmen's compensation division (under bureau of insurance):

George H. Thigpen, commissioner, ex officio superintendent of insurance.

R. P. Coleman, deputy superintendent of insurance.

Roy M. Thigpen, workmen's compensation clerk.

Address of division: Montgomery.

Board of coal-mine inspectors: W. B. Hillhouse, chief inspector, Birmingham.

#### Alaska

Federal mine inspector: B. D. Stewart, supervising mining engineer, United States Geological Survey, Juneau.

**Arizona****Industrial commission:**

R. B. Sims, chairman.  
 Burt H. Clingan.  
 W. E. Hunter.  
 Harry R. Tritle, secretary.  
 John J. Taheny, attorney.  
 J. C. Sanders, industrial agent.  
 A. C. Kingsley, medical examiner.

Address of commission: Phoenix.

State inspector of mines: Tom C. Foster, Phoenix.

United States Employment Service: R. E. Crouse, superintendent, Phoenix.

**Arkansas****Bureau of labor and statistics:**

W. A. Rooksbery, commissioner.  
 E. I. McKinley, deputy commissioner and supervisor of statistical division.  
 J. D. Newcomb, jr., chief boiler inspector.

**Industrial welfare commission—**

W. A. Rooksbery, ex officio member and chairman.  
 Mrs. Frank Gibb, secretary.  
 Claude M. Burrow.  
 Mrs. C. H. Hatfield.  
 Elmer Grant.

Address of bureau: State Capitol, Little Rock.

Mine inspection department—Claude Speegle, State mine inspector, Fort Smith, Ark.

United States Employment Service: W. A. Rooksbery, Federal director for State, Room 326, State Capitol, Little Rock.

**California****Department of industrial relations: Will J. French, director.****Division of industrial accidents and safety—**

Will J. French, chairman of industrial accident commission.  
 Meyer Lissner, member of industrial accident commission.  
 Delger Trowbridge, member of industrial accident commission.  
 C. H. Fry, superintendent of safety.  
 H. L. White, secretary.  
 M. R. Gibbons, medical director.  
 G. C. Faulkner, attorney.

State compensation insurance fund—Frank J. Creede, manager.

**Division of housing and sanitation—**

Most Rev. E. J. Hanna, D. D., president.  
 Charles C. Chapman.  
 R. W. Kearney, chief of division.

Division of State employment agencies—Seth R. Brown, chief, Los Angeles.

Division of labor statistics and law enforcement—Walter G. Mathewson, chief.

**Division of industrial welfare—**

A. B. C. Dohrmann, chairman.  
 Mrs. Katherine Philips Edson, chief.  
 George F. Neal.  
 James W. Costello.

Address of department: State Building, San Francisco.

United States Employment Service: Seth R. Brown, Federal director for State, 465 Subway Terminal Building, Los Angeles.

**Colorado****Bureau of labor statistics:**

Charles M. Armstrong, secretary of State and ex officio labor commissioner.

M. H. Alexander, deputy labor commissioner and chief factory inspector.

Address of bureau: Denver.

**Industrial commission:**

Thomas Annear, chairman.

W. H. Young.

George M. Taylor.

Feay B. Smith, secretary.

W. L. Hogg, referee.

State compensation insurance fund—Howard Redding, manager.

Minimum wage commission (according to an act passed by the 1917 legislature and effective July 20, 1917, the industrial commission performs the duties of the minimum wage commission).

Address of commission: Denver.

Coal-mine inspection department: James Dalrymple, chief inspector, Denver.

Bureau of Mines (metal mines): John T. Joyce, commissioner, Denver.

United States Employment Service: Harry R. Burch, superintendent, 1316 Eighteenth Street, Denver.

**Connecticut**

**Department of labor and factory inspection:**

Harry E. Mackenzie, commissioner.

John J. Burke, deputy commissioner.

P. H. Connolly, deputy commissioner of factory inspection.

State employment offices—Harry E. Mackenzie, commissioner.

Address of department: Hartford.

**Board of compensation commissioners:**

Frederic M. Williams, chairman, county courthouse, Waterbury.

Charles Kleiner, New Haven.

Charles E. Williamson, 90 Cannon Street, Bridgeport.

Leo J. Noonan, 54 Church Street, Hartford.

Albert J. Bailey, Central Building, Norwich.

**State board of mediation and arbitration:**

Frank A. Hagarty, Hartford.

Joseph H. Lawler, Waterbury.

Frank M. Creagh, Stamford.

United States Employment Service: Harry E. Mackenzie, Federal director for State, Hartford.

**Delaware**

**Labor commission:**

Miss Helen S. Garrett, chairman.

John H. Hickey.

Newlin T. Booth.

Thomas C. Frame, jr.

George A. Hill.

Miss Marguerite Postles, secretary.

Address of commission: Wilmington.

Child labor division—Charles A. Hagner, chief, Wilmington.

Women's labor division—Miss Marguerite Postles, assistant, Wilmington.

**Industrial accident board:**

Walter O. Stack, president.

Robert K. Jones.

William J. Swain.

James B. McManus, secretary.

Address of board: Dover, and Delaware Trust Building, Wilmington.

United States Employment Service: LeRoy Kramer, superintendent, Old Custom Building, Wilmington.

**District of Columbia**

United States Employment Service: Cecil R. Chittenden, superintendent, 1410 Pennsylvania Avenue NW., Washington, D. C.

**Florida**

State labor inspector: John H. Mackey, Jacksonville.



**Georgia****Department of commerce and labor:**

H. M. Stanley, commissioner.  
 W. E. Christie, assistant commissioner.  
 P. T. McCutchen, factory inspector.

Address of department: Atlanta.

**Industrial commission:**

H. M. Stanley, chairman.  
 George M. Napier, attorney general (ex officio).  
 Max E. Land, representing employers.  
 T. E. Whitaker, representing employees.  
 C. W. Roberts, medical director.  
 Sharpe Jones, secretary-treasurer.  
 Elizabeth Ragland, assistant secretary.  
 A. R. Arnan, auditor and inspector.

Address of commission: Atlanta.

United States Employment Service: Cator Woolford, Federal director for State,  
 42 Fairlie Street, Atlanta.

**Hawaii***City and County of Honolulu***Industrial accident board:**

M. Macintyre, chairman.  
 A. J. Campbell.  
 A. J. Wirtz.  
 R. S. Kelly.  
 J. H. Worrall.  
 A. F. Schmitz, secretary.

Address of board: Territorial Office Building, Honolulu, T. H.

*County of Maui***Industrial accident board:**

Joseph H. Gray, chairman, Wailuku.  
 Don T. Carey, Wailuku.  
 Ralph H. Wilson, Wailuku.  
 Mrs. W. Weddick, Lahaina.  
 W. F. Crockett, Wailuku.  
 Mrs. Francis S. Wadsworth, inspector and secretary, Wailuku.

*County of Hawaii***Industrial accident board:**

Byron K. Baird, chairman  
 Otto Rose.  
 James Webster.  
 Dr. H. B. Elliot.  
 Gavin A. Bush.  
 Mrs. L. Hazel Bayly, secretary.

Address of board: Hilo.

*County of Kauai***Industrial accident board:**

J. M. Lydgate, chairman, Lihue.  
 H. H. Brodie, Hanapepe.  
 J. B. Fernandez, jr., Kapaa.  
 C. H. Gates, Lihue.  
 J. P. Clapper, Kealia.

**Idaho****Industrial accident board:**

Lawrence E. Worstell, chairman.  
 Joel Brown.  
 G. W. Suppiger.  
 John D. Case, secretary.

Address of board: Boise.

State insurance fund: F. E. Fisk, Boise.

Inspector of mines: Stewart Campbell, Boise.

**Illinois**

Department of labor: George B. Arnold, director, Springfield.  
 Division of factory inspection—W. H. Curran, chief inspector, 1543 Transportation Building, Chicago.  
 Division of free employment offices—C. M. Crayton, State superintendent, Springfield.  
 Division of private employment agencies—John J. McKenna, chief inspector, 608 South Dearborn Street, Chicago.  
 General advisory board (for Illinois Free Employment Offices)—  
 Dr. A. H. R. Atwood, secretary (representing employers), Chicago.  
 Oscar G. Mayer (representing employers).  
 John H. Walker (representing employees).  
 Agnes Nestor (representing employees).  
 Industrial commission—  
 William M. Scanlan, chairman.  
 John J. Brenholt, jr. (representing employers).  
 John B. French (representing employers).  
 James Short (representing employees).  
 Clayton A. Pense (representing employees).  
 Walter F. Rohm, secretary.  
 Dr. S. Latham, medical director.  
 Address of commission: 300 West Adams Street, Chicago.  
 Bureau of statistics—Sidney W. Wilcox, chief, 300 West Adams Street, Chicago.  
 Department of mines and minerals: A. D. Lewis, director, Springfield.  
 United States Employment Service: Barney Cohen, Federal director for State, 116 North Dearborn Street, Chicago.

**Indiana**

Industrial board:  
 Roscoe Kiper, chairman.  
 Ray V. Gibbons.  
 Walter W. Wills.  
 Edgar A. Perkins, sr.  
 Horace G. Yergin.  
 Charles A. Rockwell, secretary.  
 Department of factories, buildings, and workshops—James E. Reagin, chief inspector.  
 Department of boilers—James M. Woods, chief inspector (also locomotive inspector for the public service commission).  
 Department of women and children—Mrs. Jessie Gremelspacher, director.  
 Address of board: Indianapolis.  
 Department of mines and mining—Albert C. Dally, chief inspector, Indianapolis.  
 United States Employment Service: Walter W. Wills, Federal director, for State, Room 404, State Capitol, Indianapolis.

**Iowa**

Bureau of labor: Henry V. Hoyer, commissioner.  
 Free employment bureau—George B. Albert, clerk.  
 Address of bureau: Des Moines.  
 Workmen's compensation service:  
 A. B. Funk, industrial commissioner.  
 Ralph Young, deputy commissioner.  
 Ora Williams, secretary.  
 Dr. Oliver J. Fay, medical counsel.  
 Address of service: Des Moines.  
 State bureau of mines:  
 W. E. Holland, inspector first district, Centerville.  
 R. T. Rhys, inspector second district, Ottumwa.  
 Edward Sweeney, inspector third district, Des Moines.  
 J. R. Frank, secretary, Des Moines.  
 United States Employment Service: A. L. Urick, Federal director for State, Des Moines.

**Kansas**

Commissioner of labor and industry: G. Clay Baker, chairman.

Harry C. Bowman, commissioner.

C. J. Beckman, commissioner.

John Bean, jr., secretary.

Address of commission: State House, Topeka.

Department of workmen's compensation—

G. Clay Baker, commissioner.

Harry C. Bowman, commissioner.

Wint Smith, examiner.

Address of department: State House, Topeka.

Department of labor—

C. J. Beckman, Federal director and commissioner of labor in charge of factory and mine inspection, free employment, and women's and children's division.

Address: Statehouse, Topeka.

**Kentucky**

Department of agriculture, labor, and statistics:

Newton Bright, commissioner, Frankfort.

Edward F. Seiller, chief labor inspector, Louisville.

John W. Rogers, deputy labor inspector, Louisville.

John M. Hunt, deputy labor inspector, Covington.

Miss Louie Duncan Brown, deputy labor inspector, Lexington.

Mrs. Hallie B. Williams, deputy labor inspector, Henderson.

Department of mines: W. H. Jones, chief inspector, Lexington.

Workmen's compensation board:

Clyde R. Levi, chairman, Ashland.

Charles Gorman, member, Louisville.

Luther C. Little, member, McKee.

H. S. McGuire, referee, Lexington.

W. T. Short, referee, Richmond.

J. R. Higdon, referee, Owensboro.

T. N. Hazelip, referee, Louisville.

Wm. Dingus, referee, Prestonsburg.

B. D. Herndon, secretary, Frankfort.

J. B. Eversole, actuary, Frankfort.

**Louisiana**

Bureau of labor and industrial statistics:

E. L. Engerran, commissioner, New Orleans.

Mrs. Edward Pillsbury, factories inspector, New Orleans.

United States Employment Service: G. T. Adams, superintendent, 510 Common Street, Shreveport.

**Maine**

Department of labor and industry: Charles O. Beals, commissioner, Augusta.

Industrial accident commission:

Donald D. Garcelon, chairman.

Earle L. Russell, associate legal member.

Charles O. Beals (ex officio), commissioner of labor.

Wilbur D. Spencer (ex officio), insurance commissioner.

Address of commission: Augusta.

State board of arbitration and conciliation:

Frank H. Ingraham, chairman, Rockland.

Edward F. Gowell, Berwick.

William T. Hinekley, secretary, 178 Forrest Avenue, Bangor.

United States Employment Service: Charles O. Beals, Federal director for State, Augusta.



**Maryland**

Board of labor and statistics: J. Knox Insley, M. D., commissioner, 16 West Saratoga Street, Baltimore.

Bureau of mines—John J. Rutledge, chief mine engineer, 22 Light Street, Baltimore.

Mine examining board—John J. Rutledge, chairman, 22 Light Street, Baltimore.

State industrial accident commission:

Robert H. Carr, chairman.

Omar D. Crothers.

George Louis Eppler.

Albert E. Brown, secretary.

Miss R. O. Harrison, director of claims.

Dr. Robert P. Bay, chief medical examiner.

State accident fund—

James E. Green, jr., superintendent.

Address of commission: 741 Equitable Building, Baltimore.

United States Employment Service: (Vacancy.)

**Massachusetts**

Department of labor and industries:

E. Leroy Sweetser, commissioner.

Miss Ethel M. Johnson, assistant commissioner.

Associate commissioners (constituting the board of conciliation and arbitration and the minimum wage commission)—

Edward Fisher, chairman.

Herbert P. Wasgatt.

Samuel Ross.

Division of industrial safety—John P. Meade, director.

Division of statistics (including public employment offices)—Roswell F. Phelps, director.

Division of standards—Francis Meredith, director.

Division of minimum wage—Miss Ethel M. Johnson, acting director.

Address of department: Boston.

Department of industrial accidents:

William W. Kennard, chairman.

Edward E. Clark.

David T. Dickinson.

Joseph A. Parks.

Chester E. Gleason.

Charles M. Stiller.

Mrs. Emma S. Tousant.

Robert E. Grandfield, secretary.

Francis D. Donoghue, M. D., medical adviser.

Address of department: Boston.

United States Employment Service: E. Leroy Sweetser, Federal director for State, Boston.

**Michigan**

Department of labor and industry:

Eugene J. Brock, labor commissioner,<sup>1</sup> chairman.

Samuel H. Rhoads, compensation commissioner.

Isabel Larwill, compensation commissioner.

Theo. T. Jacobs, compensation commissioner.

H. A. Lett, statistician.

H. F. Baker, secretary.

Address of department: Lansing.

State accident fund: William T. Shaw, manager, Lansing.

<sup>1</sup> The chairman administers the general labor laws of the State other than the workmen's compensation law, which is administered by the three compensation commissioners.

**Minnesota****Industrial commission:**

Henry McColl, chairman.

F. A. Duxbury.

J. D. Williams.

John P. Gardiner, secretary.

Division of workmen's compensation—F. E. Hoffmann, chief.

Division of accident prevention—David R. Henderson, chief.

Division of boiler inspection—George Wilcox, chief.

Division of women and children—Miss Louise E. Schutz, superintendent.

Division of statistics—Carl E. Dahlquist, chief.

Address of commission: 612 Bremer Arcade, St. Paul.

United States Employment Service: J. D. Williams, Federal director for State,  
612 Bremer Arcade, St. Paul.

**Mississippi****Bureau of Industrial Hygiene, and Factory Inspection:**

J. W. Dugger, M. D., director.

**Missouri****Department of labor and industrial inspection:**

Mrs. Amanda D. Hargis, commissioner, Jefferson City.

**Workmen's compensation commission:**

Evert Richardson, chairman.

Orin H. Shaw.

Jay J. James.

(Vacancy), secretary.

Address of commission: Jefferson City.

**Bureau of Mines:**

Inspection department—Frank G. Fenix, chief inspector, Joplin.

United States Employment Service: Amanda D. Hargis, Federal director for  
State, Jefferson City.

**Montana****Department of agriculture, labor, and industry:**

A. H. Stafford, commissioner.

Division of labor, Barclay Craighead, chief.

State employment office, Barclay Craighead, chief.

Address of department: Helena.

**Industrial accident board:**

J. Burke Clements, chairman.

G. P. Porter, State auditor and (ex officio) commissioner of insurance.

A. H. Stafford, (ex officio) treasurer of the board.

George G. Watt, secretary.

Harold O. Mead, chief accountant

Duncan McRae, clerk.

Bureau of safety inspection, Duncan McRae, chief clerk.

Address of board: Helena.

**Nebraska**

Department of labor: Ernest M. Pollard, secretary of labor and commissioner,  
State Capitol, Lincoln.

**Nevada**

Office of labor commissioner: William Royle, labor commissioner, Carson City.

**Industrial commission:**

Dan J. Sullivan, chairman.

Alex. L. Tannahill.

William Royle.

Dr. Vinton A. Muller, chief medical adviser, Reno.

Address of commission: Carson City.

Inspector of mines: A. J. Stinson, Carson City.

United States Employment Service: William Royle, Federal director for State,  
Room 34, Capitol Building, Carson City.

**New Hampshire**

**Bureau of labor:**

John S. B. Davie, commissioner, Concord.  
Bion L. Nutting, factory inspector, Concord.  
Harold I. Towle, factory inspector, Laconia.  
Mary R. Chagnon, factory inspector, Manchester.

**State board of conciliation and arbitration:**

J. R. McLane (representing public), Manchester.  
Walter F. Duffy (representing manufacturers), Franklin.  
Russell C. Thorsell (representing labor), Exeter.

United States Employment Service: John S. B. Davie, Federal director for State, Concord.

**New Jersey**

**Department of labor: Charles R. Blunt, commissioner.**

Bureau of general and structural inspection and explosives—Charles H. Weeks, deputy commissioner of labor.

Bureaus of hygiene, sanitation, and mine inspection—John Roach, deputy commissioner of labor.

Bureau of electrical and mechanical equipment—  
(Vacancy), chief.

Charles H. Weeks, and John Roach, deputy commissioners, temporarily in charge.

Bureau of statistics and records—James A. T. Gribbin, chief.

Bureau for women and children—Mrs. Isabelle M. Summers, director.

Bureau of engineers' license, steam boiler, and refrigerating plant inspection—  
Joseph F. Scott, chief examiner.

**Bureau of workmen's compensation—**

Charles R. Blunt, commissioner.

William F. Stubbs, deputy commissioner and secretary.

Harry J. Goas, deputy commissioner.

Charles E. Corbin, deputy commissioner.

John J. Stahl, referee.

John J. Kent, special investigator.

John C. Wegner, special investigator.

Harry F. Monroe, special investigator.

Frank Mobius, special investigator.

Hugh J. Arthur, special investigator.

William J. Wilkie, special investigator.

Maurice S. Avidan, M. D., medical adviser.

Bureau of employment—Russell J. Eldridge, director. Address of department: Trenton.

United States Employment Service: Charles R. Blunt, Federal director for State, Trenton.

**New Mexico**

State inspector of coal mines: W. W. Risdon, Gallup.

**New York**

**Department of labor:**

Frances Perkins, industrial commissioner.

(Vacancy), deputy industrial commissioner.

Sara McPike, secretary.

**Industrial board—**

Richard J. Cullen, chairman.

James S. Whipple.

Edward W. Edwards.

Leonard W. Hatch.

Nelle Swartz.

Bureau of inspection—James L. Germon, director.

Bureau of workmen's compensation—

Verne A. Zimmer, director.

Dr. Raphael Lewy, chief medical examiner.

Bureau of industrial relations—James Brady, director.

Division of mediation and arbitration—A. J. Portenar, chief mediator.



## Department of labor—Continued.

Division of employment—Richard A. Flinn, chief, 114 East Twenty-fifth Street, New York.

Division of aliens—Lillian R. Sire, director.

Division of industrial code—

Edward E. J. Pierce, referee.

Thomas C. Eipper, referee.

Division of engineering—William J. Picard, chief, Albany.

Bureau of industrial hygiene—Dr. Leland E. Cofer, director.

Bureau of statistics and information—

Eugene B. Patton, director.

Mary E. Lonigan, chief statistician, Albany.

Bureau of women in industry—Frieda S. Miller, director.

State insurance fund—C. G. Smith, manager, 432 Fourth Avenue, New York.

Division of self-insurance—J. A. McGinniss, director. General address of department except where otherwise noted: 124 East Twenty-eighth Street, New York.

United States Employment Service: Frances Perkins, Federal director for State, 124 East Twenty-eighth Street, New York, N. Y.

## North Carolina

Department of labor and printing: Frank D. Grist, commissioner, Raleigh.  
Child welfare commission: E. F. Carter, secretary and executive officer, Raleigh.

## Industrial commission:

Matt H. Allen, chairman.

J. Dewey Dorsett, representing employers.

T. A. Wilson, representing employees.

E. W. Price, secretary.

Address of commission: Raleigh.

United States Employment Service: Frank D. Grist, Federal director for State, Raleigh.

## North Dakota

Department of agriculture and labor: Joseph A. Kitchen, commissioner, Bismarck.

## Workmen's compensation bureau:

Joseph A. Kitchen, chairman.

S. S. McDonald.

S. A. Olsness.

James E. Kiley.

R. E. Wenzel.

Elmer Knodel, secretary.

Address of bureau: Bismarck.

Minimum wage commission: Alice Angus, secretary, Bismarck.

Coal mine inspection department: Edwin R. Rupp, inspector, Bismarck.

United States Employment Service: S. R. St. Pierre, superintendent, 602 North Pacific Avenue, Fargo.

## Ohio

Department of industrial relations: William T. Blake, director.

## Industrial commission—

L. E. Nysewander, chairman.

Thomas M. Gregory.

Wellington T. Leonard.

William T. Blake, secretary.

## Division of workmen's compensation—

Ross Hedges, assistant director, department of industrial relations.

Dale W. Stump, supervisor of claims.

Evan I. Evans, supervisor of actuarial division.

G. L. Coffinbery, auditor and statistician.

Dr. H. H. Dorr, chief medical examiner.

Division of labor statistics (including free employment service)—George F. Miles, chief.

Department of industrial relations—Continued.

Division of safety and hygiene—

Thomas P. Kearns, superintendent.

Carl C. Beasor, chief statistician.

Division of factory inspection—Thos. C. Devine, chief.

Division of boiler inspection—C. O. Myers, chief.

Division of examiners of steam engineers—David J. Lewis, chief.

Division of mines—E. W. Smith, chief.

Address of department: Columbus.

United States Employment Service: George F. Miles, Federal director for State, Columbus.

Oklahoma

Department of labor: W. A. Pat Murphy, commissioner, Oklahoma City.

Board of arbitration and conciliation:

W. A. Pat Murphy, chairman, Oklahoma City.

James Hughes, assistant commissioner of labor, secretary, Oklahoma City.

O. B. Toalson, Bartlesville.

John Kramer, R. R. No. 4, Broken Arrow.

T. F. Gwaltney, Durant.

James C. Powers, Oklahoma City.

Charles Pound, Cushing.

A. Derryberry, Altus.

Industrial commission:

G. T. Bryan, chairman.

Mrs. F. L. Roblin, commissioner.

L. B. Kyle, commissioner.

Mrs. A. E. Bond, secretary.

Mrs. Alice Goff, statistician.

Address of commission: Oklahoma City.

United States Employment Service: W. A. Pat Murphy, Federal director for State, Oklahoma City.

Oregon

Bureau of labor:

C. H. Gram, commissioner and factory inspector, Salem.

Ray E. Sprinkle, deputy commissioner, Portland.

Board of inspectors of child labor:

Stephen G. Smith, chairman, 490 Burnside Street, Portland.

Mrs. Sarah A. Evans, Portland.

Miss Pauline Kline, Corvallis.

Mrs. A. M. Grilley, Portland.

Mrs. Millie R. Trumbull, secretary, 707 Oregon Building, Portland.

Industrial welfare commission:

Leslie M. Scott, chairman.

F. C. Whitten.

Mrs. Elizabeth J. Williams.

Mrs. Millie R. Trumbull, secretary and inspector.

Address of commission: 707 Oregon Building, Portland.

State industrial accident commission:

Sam Laughlin, chairman.

W. H. Fitzgerald.

E. E. Bragg.

Dr. F. H. Thompson, medical adviser.

Address of commission: Salem.

State board of conciliation:

William L. Brewster, chairman, Failing Building, Portland.

John K. Flynn, 589 Hoyt Street, Portland.

William E. Kimsey, secretary, 244 Salmon Street, Portland.

United States Employment Service: C. H. Gram, Federal director for State, 552 Courthouse, Portland.

**Pennsylvania**

Department of labor and industry: **Peter Glick, secretary.**

Industrial board—

**A. L. Linderman.**

**John A. Phillips.**

**George W. Fisher.**

**Mrs. Hugh Neely Fleming.**

**J. S. Arnold, secretary.**

State workmen's insurance board—

**Peter Glick, chairman.**

**M. H. Taggart, insurance commissioner.**

**Edward Martin, State treasurer.**

State workmen's insurance fund—**Philip H. Dewey, manager.**

Workmen's compensation board—

**Paul W. Houck, chairman.**

**Joseph E. Fleitz.**

**J. L. Morrison.**

**Peter Glick, ex officio.**

**J. C. Detweiler, secretary.**

Bureau of executive—**W. A. Riddle, deputy secretary.**

Bureau of workmen's compensation—**W. H. Horner, director.**

Bureau of employment—**Walter J. Lloyd, director.**

Bureau of industrial relations—**David Williams, director.**

Bureau of industrial standards—**Cyril Ainsworth, director.**

Bureau of women and children—**Sarah M. Soffel, director.**

Bureau of inspection—**Harry D. Immel, director.**

Bureau of rehabilitation—**S. S. Riddle, director.**

Bureau of statistics—**William J. Maguire, director.**

Address of department: **Harrisburg.**

Department of mines:

**Walter H. Glasgow, secretary.**

**Frank Hall, deputy secretary.**

Address of department: **Harrisburg.**

United States Employment Service: **Walter J. Lloyd, Federal director for State, Harrisburg.**

**Philippine Islands**

Bureau of labor (under department of commerce and communications): **Hermengildo Cruz, director, Manila.**

**Porto Rico**

Department of agriculture and labor: **Carlos E. Chardon, commissioner.**

Bureau of labor, **Carmelo Honore, chief.**

Mediation and conciliation commission, **Luis Villaronga Charriez.**

Address of department: **San Juan.**

Industrial commission:

**Juan M. Herrero, chairman.**

**M. Leon Parra, commissioner.**

**P. Rivera Martinez, commissioner.**

**Joaquin A. Becerril, secretary.**

Address of commission: **San Juan.**

**Rhode Island**

Department of labor: **Edward L. Byers, commissioner, Providence.**

Office of factory inspectors: **J. Ellery Hudson, chief inspector, Providence.**

Board of labor (for the adjustment of labor disputes):

**Edward L. Byers, commissioner of labor, chairman.**

**Edwin O. Chase (representing employers).**

**William C. Fisher (representing employers).**

**Albert E. Hohler (representing employees).**

**John H. Powers (representing employees).**

**Christopher M. Dunn, deputy commissioner of labor, secretary.**

Address of board: **Providence.**

United States Employment Service: **Edward L. Byers, Federal director for State, Providence.**



**South Carolina**

Department of agriculture, commerce, and industries: J. W. Shealy, commissioner.

Labor division—A. H. Gibert, jr., chief inspector.

Address of department, Columbia.

Board of conciliation and arbitration:

James C. Self, chairman, Greenwood.

H. E. Thompson, secretary, Batesburg.

W. H. McNairy, Dillon.

**South Dakota**

Office of industrial commissioner: F. L. Perry, industrial commissioner, Pierre.

**Tennessee**

Department of labor:

Ed. M. Gillenwaters, commissioner, Nashville.

Albert M. Alexander, secretary, Nashville.

Division of factory inspection, M. F. Nicholson, chief inspector, Nashville.

Division of mines, O. P. Pile, chief inspector, Cowan.

Division of hotel inspection, Sam I. Bolton, inspector, Nashville.

Division of workmen's compensation, Harry L. Nelson, superintendent, Nashville.

United States Employment Service: W. H. Sawyer, special agent, Knoxville.

**Texas**

Bureau of labor statistics:

Charles McKemy, commissioner.

Robert B. Gragg, chief deputy.

Miss Nell Kirkpatrick, secretary.

Miss Marie Nash, assistant secretary.

Address of bureau: Austin.

Industrial commission (handles industrial disputes):

Carl Pool, chairman, Sherman.

A. L. Kinsley, secretary, San Antonio.

W. J. Moran, El Paso.

Harry L. Spencer, Houston.

L. L. Shields, Coleman.

Industrial accident board:

(Vacancy), chairman.

J. M. Pittillo.

Mrs. Espa Stanford.

E. B. Barnes, secretary.

Address of board: Austin.

United States Employment Service: C. W. Woodman, assistant director, 806 Taylor Street, Fort Worth.

**Utah**

Industrial commission:

William M. Knerr, chairman.

C. F. McShane.

Henry N. Hayes.

Carolyn I. Smith, secretary.

State insurance fund, Charles A. Caine, manager.

Coal mine inspector, John Taylor.

Address of commission: Salt Lake City.

**Vermont**

Office of commissioner of industries:

Clarence R. White, commissioner, Montpelier.

Fred S. Pease, deputy commissioner, Burlington.

State board of conciliation and arbitration:

Henry C. Brislin, Rutland.

Ashley J. Goss, Danville.

Hugh J. M. Jones, Montpelier.

United States Employment Service: Clarence R. White, Federal director for State, Montpelier.

**Virginia****Department of labor and industry:**

John Hopkins Hall, jr., commissioner.

H. W. Furlow, assistant commissioner.

Division of mines—A. G. Lucas, chief.

Division of factory inspection—John Gribben, chief.

Division of women and children—Miss Carrie B. Farmer, director.

Division of industrial statistics—Miss Elizabeth Myers, statistician.

Address of department: Richmond.

**Industrial commission:**

W. H. Nickels, jr., chairman.

C. G. Kizer.

Parke P. Deans.

F. P. Evans, statistician.

W. F. Bursey, secretary.

W. L. Robinson, examiner.

Address of commission: Richmond.

United States Employment Service: John Hopkins Hall, jr., Federal director for State, Room 318, State Office Building, Richmond.

**Washington****Department of labor and industries:**

Claire Bowman, director.

L. M. Rickerd, secretary.

**Division of industrial insurance—**

John Shaughnessy, supervisor of industrial insurance and medical aid.

Dr. L. L. Goodnow, chief medical adviser.

R. J. McLean, claim agent.

**Division of safety—**

Martin J. Flyzik, supervisor of safety.

William R. Reese, mines inspector.

George T. Wake, deputy mine inspector.

**Division of industrial relations—**

Martin J. Flyzik, supervisor of industrial relations.

William J. Coates, assistant supervisor of industrial relations.

R. M. Van Dorn, industrial statistician.

Mrs. G. V. Haney, supervisor of women in industry.

**Industrial welfare committee—**

Claire Bowman, director of labor and industries, chairman.

John Shaughnessy, supervisor of industrial insurance.

Martin J. Flyzik, supervisor of industrial relations.

R. M. Van Dorn, industrial statistician.

Mrs. G. V. Haney, supervisor of women in industry, executive secretary.

Address of department: Olympia.

United States Employment Service: William C. Carpenter, Federal director for State, Spokane.

**West Virginia**

Bureau of labor: Howard S. Jarrett, commissioner, Charleston.

**Workmen's compensation department:**

Lee Ott, commissioner.

J. E. Brown, secretary.

J. R. Hanley, actuary.

Lewis J. Frey, chief statistician.

R. H. Walker, chief medical examiner.

Address of department: Charleston.

Department of mines: R. M. Lambie, chief, Charleston.

United States Employment Service: Howard S. Jarrett, Federal director for State, Charleston.

**Wisconsin****Industrial commission:**

Fred M. Wilcox, chairman.

R. G. Knutson.

Voyta Wrabetz.

A. J. Altmeyer, secretary.

Industrial commission—Continued.

Safety and sanitation department—R. McA. Keown, engineer.

Workmen's compensation department—F. T. McCormick, A. T. Flint, I. M.

Kittleson, H. F. Ohm, examiners.

Employment department—R. G. Knutson, director.

Apprenticeship department—Walter F. Simon, supervisor.

Woman and child labor department—

Taylor Frye, director.

Miss Maud Swett, field director, Milwaukee.

Statistical department—Orrin A. Fried, statistician.

Address of commission: Madison.

Board of conciliation:

Chris Hochgreve, Green Bay.

Jacob P. Beuscher, Milwaukee.

Homer Witzig, Superior.

United States Employment Service: R. G. Knutson, Federal director for State, Madison.

**Wyoming**

Department of labor and statistics:

Harry C. Hoffman, commissioner.

W. E. Jones, deputy commissioner.

Child labor board.

Harry C. Hoffman, secretary.

George E. Brown.

Dr. W. G. Hassel.

Address of department: Cheyenne.

State coal-mine inspection department.

Lyman Fern, chief inspector, Rock Springs.

David K. Wilson, deputy inspector, Rock Springs.

R. E. Gildroy, deputy inspector, Sheridan.

Address of the department: Rock Springs.

Workmen's compensation department (under State treasurer's office):

W. H. Edelman, State treasurer.

C. B. Morgan, deputy treasurer.

Arthur Calverley, assistant deputy and department manager.

Address of department: Cheyenne.

United States Employment Service: Keith Templar, special agent, Casper.

**Albania**

Ministry of Public Works (address, Tirana).

**Argentina**

Ministry of the Interior (address, Buenos Aires):

National labor department.

**Australia**

Commonwealth Bureau of Census and Statistics (address, Melbourne).

**Austria**

Federal Ministry for Social Administration (address, 1 Hanuschgasse 3, Vienna).

**Belgium**

Ministry of Industry, Labor, and Social Welfare (address, 12 Rue Lambermont, Brussels):

Labor office.

**Bolivia**

National Labor Office (address, La Paz).

Ministry of Promotion (address, La Paz).



**Brazil**

Ministry of Agriculture, Industry, and Commerce (address, Rio de Janeiro).

**Bulgaria**

Ministry of Commerce, Industry, and Labor (address, Rue Alaninska, 48, Sofia).  
Labor section.

**Canada****Department of labor:**

Peter Heenan, minister.  
H. H. Ward, deputy minister.  
Gerald H. Brown, assistant deputy minister.  
M. S. Campbell, chief conciliation officer.  
J. D. O'Neill, legal adviser.  
R. A. Rigg, director of employment service.  
E. G. Blackadar, superintendent of Dominion Government annuities.  
F. A. McGregor, registrar of combines investigation act.  
C. W. Bolton, chief of statistical branch.  
F. J. Plant, chief of labor intelligence branch.  
Address of department: Ottawa, Ontario.

**Alberta****Bureau of labor:**

W. Smitten, commissioner of labor.  
F. W. Hobson, chief boiler inspector.  
H. M. Bishop, chief factory inspector.  
G. P. Barber, chief theater inspector.  
A. A. Millar, chief mine inspector.  
Employment service—W. Smitten, commissioner of labor, director.  
Minimum wage board—  
A. A. Carpenter, chairman.  
W. Smitten, commissioner of labor, secretary.  
Address of bureau: Edmonton.

**Government employment bureau:**

William Carnill, superintendent, Calgary.  
W. G. Paterson, superintendent, Edmonton.  
A. R. Redshaw, superintendent, Lethbridge.  
J. W. Wright, superintendent, Medicine Hat.  
A. A. Colquhoun, superintendent, Drumheller.

**Workmen's compensation board:**

Alex Ross, chairman.  
Walter F. McNeill, commissioner.  
James A. Kinney, commissioner.  
Frederick D. Noble, secretary.  
Address of board: Qu'Appelle Building, Edmonton.

**British Columbia****Department of labor:**

Hon. W. A. McKenzie, minister, Victoria.  
J. D. McNiven, deputy minister, Victoria.  
W. T. Hamilton, chief factories inspector, Vancouver.  
Employment service—J. H. McVety, general superintendent, Vancouver.  
Minimum wage (for females) board—

J. D. McNiven, deputy minister of labor, chairman.  
Mrs. Helen G. MacGill.  
Thomas Mathews.  
Miss Mabel Agnes Cameron, secretary.

Hours of work and minimum wage (for males) board—J. D. McNiven, deputy minister of labor, chairman, Parliament Building, Victoria.

**Workmen's compensation board:**

E. S. H. Winn, K. C., chairman.  
Parker Williams.  
Hugh B. Gilmour.  
F. W. Hinsdale, secretary.

Address of board: Board of Trade Building, Vancouver.

**Manitoba**

**Bureau of labor:**

W. R. Clubb, minister of public works.  
Edward McGrath, secretary.  
Arthur MacNamara, assistant deputy minister of public works.

**Fair wage board—**

D. L. McLean, power commissioner.  
J. W. Morley.  
E. Claydon.  
Thomas J. Williams.  
C. J. Harding.

**Minimum wage board—**

George N. Jackson, chairman.  
Mrs. Edna M. Nash.  
James Winning.  
Mrs. Jessie MacIennnon.

Address of bureau: Winnipeg.

**Workmen's compensation board:**

C. K. Newcombe, commissioner.  
George E. Carpenter, director.  
Fred G. Dixon, director.  
A. G. Fraser, M. D., chief medical officer.  
Nicholas Fletcher, secretary.  
P. V. E. Jones, assistant secretary.

Address of board: Winnipeg.

**New Brunswick**

Department of labor: H. I. Taylor, minister, St. George.

**Workmen's compensation board:**

J. A. Sinclair, chairman.  
F. C. Robinson.  
J. L. Sugrue.

Department of factory inspection—John Kenney, inspector.

Address of board: St. John.

**Nova Scotia**

**Department of public works and mines:**

Gordon S. Harrington, minister.  
Norman McKenzie, deputy minister.

Address of department: Halifax.

**Workmen's compensation board:**

F. L. Milner, K. C., chairman.  
Fred W. Armstrong, vice chairman.  
John T. Joy, commissioner.  
Dr. M. D. Morrison, medical officer.  
John McKeagan, assessment officer.  
N. M. Morison, claims officer.

Address of board: Halifax.

**Employment service:**

C. J. Cotter, superintendent men's division, Halifax.  
Miss Elda E. Caldwell, superintendent women's division, Halifax.

**Ontario**

**Department of labor:**

Hon. Dr. Forbes Godfrey, minister.  
James H. H. Ballantyne, deputy minister.  
D. M. Medcalf, chief inspector of steam boilers.  
James T. Burke, chief inspector of factories, shops, and office buildings.  
J. M. Brown, chairman stationary and hoisting engineers' board.

Employment service—H. C. Hudson, general superintendent, Ontario offices.

Address of department: East Block, Parliament Building, Toronto.

**Minimum wage board:**

Dr. J. W. Macmillan, chairman.  
 H. G. Fester.  
 Mrs. Lydia Parsons.  
 Miss Margaret Stephens.  
 R. A. Stapells.

Address of board: East Block, Parliament Building, Toronto.

**Workmen's compensation board:**

Victor A. Sinclair, K. C., chairman.  
 Henry J. Halford, vice chairman.  
 George A. Kingston, commissioner.  
 N. B. Wormith, secretary.  
 T. Norman Dean, statistician.  
 F. W. Graham, claims officer.  
 D. E. Bell, chief medical officer.  
 J. M. Bremner, medical officer.  
 J. F. Hazlewood, medical officer.

Address of board: Metropolitan Building, Toronto.

**Quebec****Department of public works and labor:**

Antonin Galipeault, K. C. minister, Quebec.  
 Louis Guyon, deputy minister and chief inspector of industrial establishments and public buildings, 63 Notre Dame Street east, Montreal.  
 Alfred Robert, fair wages officer and deputy chief inspector, 63 Notre Dame Street east, Montreal.  
 Felix Marois, registrar of board of conciliation and arbitration, Parliament Buildings, Quebec.  
 Joseph Ainey, general superintendent of provincial employment bureaus, 61 Notre Dame Street east, Montreal.

**Women's minimum wage commission—**

Gustave Francq, chairman, 59 Notre Dame Street east, Montreal.  
 Alfred Crowe, secretary, 231 St. Paul Street, Quebec.

**Workmen's compensation commission:**

Robert Taschereau, K. C. chairman.  
 Simon Lapointe, K. C.  
 O. E. Sharpe.  
 O. G. Molleur, secretary.

Address of commission: 73 Grande Allee, Quebec.

**Saskatchewan****Department of railways, labor, and industries:**

George H. Spence, minister.  
 Thomas M. Molloy, deputy minister.  
 T. G. Thomson, superintendent of inspections.  
 Thomas Inglis, chief boiler inspector.  
 Edward Pierce, mine inspector.  
 Gerald Tomsett, general superintendent of employment.  
 John J. Stevenson, game commissioner.  
 Miss G. Halbert, minimum wage inspector.

**Minimum wage board—**

John A. Mather, chairman, Saskatoon.  
 Mrs. William Allen, member, Moose Jaw.  
 J. P. Keleher, member, Moose Jaw.  
 Mrs. F. M. Eddie, member, Regina.  
 J. K. R. Williams, member, Regina.  
 T. M. Molloy, deputy minister of labor, acting secretary, Regina.

**Chile**

Ministry of Social Welfare (address, Santiago).



### China

Ministry of Industry, Commerce and Labor (address, Nanking).

### Colombia

General Labor Office:

Ministry of Industries (address, Bogota).

### Costa Rica

Ministry of Public Works (address, San Jose).

### Cuba

Secretariat of Agriculture, Commerce, and Labor (address, Habana).

### Czechoslovakia

Ministry of Social Welfare <sup>2</sup> (address, Valdstynska, 10, Prague, III).

Ministry of Public Works <sup>3</sup> (address, Presslova, 6, Prague-Smichov).

### Denmark

Social Ministry:

Labor board—address, 25 Amaliegade, Copenhagen.

Labor and factory inspection department—address, 25 Amaliegade, Copenhagen.

Workmen's compensation board—address, 3 Kongens Nytorv, Copenhagen.

### Dominican Republic

Department of Agriculture and Commerce (address, San Domingo).

### Dutch East Indies

Department of Justice (address, Batavia, Java):

Labor bureau.

### Ecuador

Ministry of Public Welfare and Labor (address, Quito).

### Egypt

Ministry of Interior, Council of Arbitration (address, Cairo).

### Estonia

Ministry of Education and Social Welfare (address, Tallinn).

### Finland

Ministry of Social Affairs (address, Helsingfors).

### France

Ministry of Labor and Hygiene (address, Rue de Grenelle, 127, Paris).

<sup>2</sup> Handles labor relations at large.

<sup>3</sup> Labor questions relating to workers in mines; legislation; insurance statistics.

**Germany**

Ministry of Labor (address, Scharnhorststrasse, 35, Berlin, NW., 40).

**Great Britain**

Ministry of Labor (address, Montagu House, Whitehall, London, SW., 1).

**Greece**

Ministry of National Economy (address, Rue Valaoritou, 3, Athens):  
Directorate of labor and social welfare.

**Guatemala**

Ministry of Public Works <sup>4</sup> (address, Guatemala).  
Ministry of Agriculture <sup>5</sup> (address, Guatemala).

**Haiti**

Department of Labor (address, Port au Prince).

**Honduras**

Minister of Public Works and Agriculture (address Tegucigalpa).

**Hungary**

Ministry of Social Welfare and Labor (address, Kyralyi Palota, Budapest).  
Government Statistical Office (address, II Keleti Karoly utca 5, Budapest).

**India**

Department of Industries (address, Delhi).

**Irish Free State**

Department of Industry and Commerce (address, Government Building, Dublin).

**Italy**

Ministry of Corporations (address, Rome).

**Japan**

Bureau of Social Affairs (address, Tokyo).

**Latvia**

Ministry of Public Welfare (address, Riga).

**Lithuania**

Ministry of Home Affairs (address, Kaunas).

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<sup>4</sup> Handles questions relating to urban labor matters.

<sup>5</sup> Handles questions relating to rural labor matters.

### **Luxemburg**

General Directorate of Agriculture, Industry, and Social Welfare (address, Luxemburg City):  
Division of commerce, industry, and labor.

### **Mexico**

Department of Industry, Commerce, and Labor (address, Avenida Republica Argentina, num. 12, Mexico City).

### **Netherlands**

Ministry of Labor, Commerce, and Industry (address, Beznidenhout, The Hague).

### **New Zealand**

Department of Labor (address, Wellington).

### **Nicaragua**

Ministry of Public Works (address, Managua).

### **Norway**

Ministry of Social Affairs (address, Viktoria terrasse, 11-13, Oslo).

### **Panama**

Ministry of Agriculture and Public Works (address, Panama).

### **Paraguay**

Ministry of the Interior (address, Asuncion).

### **Persia**

Ministry of Commerce, Agriculture, and Public Works (address, Teheran).

### **Peru**

Ministry of Public Works (address, Lima).

### **Poland**

Ministry of Labor and Social Welfare (address, Place Dombrowski, 1, Warsaw).

### **Portugal**

Ministry of Commerce and Communications (address, Lisbon).

### **Rumania**

Ministry of Labor (address, Bucharest).

### **Salvador**

Ministry of the Interior, Industry, and Agriculture (address, San Salvador).



**Kingdom of the Serbs, Croats, and Slovenes**

Ministry of Social Policy (address Belgrade, Serbia).

**Siam**

Ministry of Commerce and Communications (address, Bangkok):  
Board of commercial development (deals with labor matters).

**Spain**

Ministry of Labor, Commerce, and Industry (address, Paseo de la Castellana, 3, Madrid).

**Sweden**

Ministry of the Interior, Division of Social Affairs (address, Mynttorget, 2, Stockholm):  
Social board.

**Switzerland**

Federal Department of National Economy (address, Palais Federal, Bern):  
Federal labor office.

**Union of South Africa**

Department of Labor (address, Pretoria).

**Uruguay**

Ministry of Industries (address, Montevideo):  
National Labor Office.

**Venezuela**

Ministry of Agriculture, Mines and Trade (address, Caracas).

# PUBLICATIONS RELATING TO LABOR

## Official—United States

ALASKA.—GOVERNOR. *Annual report to the Secretary of the Interior, for fiscal year ended June 30, 1928. Washington, Department of the Interior, 1928. 115 pp.*

The data on wages and labor conditions contained in the report are summarized in this issue.

COLORADO.—Bureau of Labor Statistics. *Twenty-first biennial report, 1927-1928. Denver, 1928. 62 pp.*

Statistics on wages and wage claims from this report are given in this issue.

— COAL MINE INSPECTION DEPARTMENT. *Sixteenth annual report, 1928. Denver, 1929. 68 pp.*

Contains data on coal production, number of mine employees, and fatal and nonfatal accidents in the coal mines of Colorado in 1928, with a directory of the coal mines of the State.

CONNECTICUT.—Department of Labor and Factory Inspection and Industrial Investigator. *Report. Hartford, 1929. [Various paging.]*

In three parts: 1. Thirty-third report of the bureau of labor statistics, period ended December 1, 1928; 2. Eleventh biennial report of the factory inspection department, for the two years ending June 30, 1928; 3. Report on the business and conditions of wage earners in the State, by the industrial investigator.

Figures giving actual hourly earnings in leading industrial establishments in Connecticut on December 1, 1928, taken from this report, are given in this issue.

FLORIDA.—Labor Inspector. *Biennial report, 1927-1928. Jacksonville, 1929. 47 pp.*

Gives information on sanitary conditions in cigar factories, on the elimination in large cities of boys under age from motion-picture operating booths, on the growing realization among employers in various industries that the employment of boys and girls under 18 is not profitable, on the evils of street selling by children, and on wages in 10-cent stores. The inspector emphasizes the need of establishing a bureau of labor statistics in Florida.

INDIANA.—Industrial Board. *Proceedings of third State-wide industrial safety conference, Indianapolis, January 26, 1928. Indianapolis, 1928. 56 pp.*

KANSAS.—Public Service Commission. Labor department. *Annual report, for the year ending December 31, 1928. Topeka, 1929. 78 pp.*

Contains a list of the factories and workshops inspected by the State labor department, together with the number of workers employed by them; mine inspection statistics, and reports on State employment offices and on railroad accidents in Kansas.

MAINE.—Department of Labor and Industry. *Ninth biennial report, for fiscal years 1927 and 1928, with the reports of the State board of arbitration and conciliation for fiscal years 1927 to 1928. Augusta, 1928. 27 pp.*

MARYLAND.—Board of Labor and Statistics. *Berry and vegetable pickers in Maryland fields. Child labor in vegetable canneries in Maryland. [Baltimore], 1929. 26 pp., illus.*

Summarized in this issue of the Labor Review.

— — — *The mentally and educationally retarded child laborer: A study of 100 applicants for special work permits. Baltimore, April, 1929. 38 pp.*

— — — *Thirty-seventh annual report, 1928. Baltimore, 1929. 119 pp.*

MISSOURI.—Bureau of Mines. Inspection Department. *Forty-first annual report, 1928. Jefferson City [1929]. 90 pp.*

Includes data on number of men employed, days worked, average daily wages, production, and fatal and nonfatal accidents in the various mines of the State.

MONTANA.—Industrial Accident Board. *Thirteenth annual report, for the 12 months ending June 30, 1928. Helena [1928?]. 69 pp.*

Summarized in this issue.

PENNSYLVANIA.—Department of Internal Affairs. Bureau of Statistics. *Sixth industrial directory of the Commonwealth of Pennsylvania. Harrisburg, 1928. 1124 pp.*

— Salary Survey Commission. *Report to the Pennsylvania General Assembly. Harrisburg, 1929. 102 pp.*

The salary survey commission was created by the General Assembly of Pennsylvania to investigate certain questions connected with the salaries and wages of State, county, township, and municipal officers and employees. This volume contains the text of the commission's report, together with various exhibits which include recommended legislation and data on the salaries of the various classes of employees.

SOUTH CAROLINA.—Department of Agriculture, Commerce, and Industries. *Yearbook, 1928. Columbia [1929]. 194 pp.*

Includes the twenty-first annual report of the State commissioner of Agriculture, commerce, and industries from which publication statistics on the textile industry of South Carolina are reproduced in this issue.

UNITED STATES.—Department of Agriculture. *Miscellaneous publication No. 31: The changing uses of textile fibers in clothing and household articles, by Edna L. Clark, Bureau of Home Economics. Washington, 1928. 55 pp.*

Reviewed in this issue.

— Department of Commerce. Bureau of Mines. *Technical paper 410: Falls of roof in bituminous coal mines—influence of the seasons and rate of production, by J. W. Paul. Washington, 1928. 40 pp.; charts.*

— — — *Technical paper 443: Coke-oven accidents in the United States during the calendar year 1927, by William W. Adams. Washington, 1929. 39 pp.*

Reviewed in this issue.

— — — Bureau of the Census. *Water transportation, 1926. Washington, 1929. 172 pp.*

Data on productivity of labor in water transportation in the United States, taken from this report, are published in this issue.

— Department of Labor. Bureau of Labor Statistics. *Bulletin No. 475: Productivity of labor in newspaper printing. Washington, 1929. 253 pp., illus.*

This bulletin was summarized in the Labor Review for May, 1929 (pp. 44–58).

— — — *Bulletin No. 480: Proceedings of the fifteenth annual convention of the Association of Governmental Officials in Industry of the United States and Canada, New Orleans, La., May 21–24, 1928. Washington, 1929. 156 pp.*

— — — *Bulletin No. 484: Wages and hours of labor of common street laborers, 1928. Washington, 1929. 44 pp.*

Summarized in the Labor Review for June, 1929 (pp. 183–185).

— — — *Bulletin No. 486: Labor legislation of 1928. Washington, 1929. 53 pp.*

— — — Women's Bureau. *Bulletin No. 69: Causes of absence for men and for women in four cotton mills. Washington, 1929. 22 pp.*

A study based on data taken from the records of four mills, covering in two cases the calendar year 1923, and in two a period beginning in June or July, 1925, and ending in 1926. In general the women showed a larger amount of time lost



than the men from each specified cause, except in the case of accidents, from which, on the average, men were liable to lose more time than women. For three mills the average time lost from illness was from 2.8 to 5.4 days for men and from 4.8 to 9.8 days for women.

UNITED STATES.—Department of Labor. Women's Bureau. *Bulletin No. 71: Selected references on the health of women in industry*, by Emily C. Brown. Washington, March, 1929. 8 pp.

— Federal Board for Vocational Education. *Bulletin No. 17, trade and industrial series No. 1: Trade and industrial education, organization, administration, and operation—a discussion of standards*. Washington, March, 1929. 152 pp. Second revised edition.

Presents the legal and administrative standards to be observed in State plans, analyzes the three leading types of organizations which give trade and industrial education, and constructively discusses supervision and teacher training.

— *Bulletin No. 82, agricultural series No. 13: Effectiveness of vocational education in agriculture*. A study of the value of vocational instruction in agriculture in secondary schools as indicated by the occupational distribution of former students. Revised edition, including interpretations of occupational surveys for the period 1922–1927. Washington, July, 1928. 55 pp.; charts.

Among the interesting statements made at the close of this report are: That from 60 to 75 per cent of the students who have been given vocational instruction in agriculture are at present in agricultural work; and that vocationally trained farmers rapidly advance in “managerial status.”

— *Bulletin No. 136, vocational rehabilitation series No. 18: Proceedings of the Fifth National Conference on Vocational Rehabilitation of Disabled Persons*, Milwaukee, September 26–28, 1928. Washington, 1929. 213 pp.

### Official—Foreign Countries

AUSTRALIA.—Department of Health. Division of Industrial Hygiene. *The excretion of lead and blood changes in workers exposed to lead*. [Sydney, 1929.] (Reprinted from the *Medical Journal of Australia*, Sydney, February 16, 1929, pp. 194–217.)

This study deals with the different methods used for the determination of lead in biological material and the results of blood examinations of employees in mines and smelters in Australia.

— (NEW SOUTH WALES).—Bureau of Statistics. *The official yearbook, 1927–28*. Sydney, 1929. 844 pp.; map, charts.

Gives the usual detailed information as to the social, financial, and industrial condition of the State, with a historical introduction and a discussion of the constitution and government. Includes data on retail and wholesale prices, rents, cost of living, employment, industrial arbitration, and wages.

— Director General of Public Health. *Extract from the report for the year ended December 31, 1927. Section 1–E: Industrial hygiene*. Sydney, 1928, pp. 74–116; charts, illus.

This report contains a study of dust samples in Sydney sandstone industries, notes on a fine type of pneumoconiosis produced by silicates and other materials, and a report of a study of ventilation in motion-picture theaters.

— (WESTERN AUSTRALIA).—Registrar of Friendly Societies. *Report of proceedings for the year ended June 30, 1928*. Perth, 1929. 20 pp.

At the close of the year the funds of the societies amounted to £423,322 as against £403,224 on June 30, 1927. Practically one-fifth (19.65 per cent) of the members had claimed sickness benefit during the year, which was a slight increase over the year before, in which the proportion was 19.24 per cent. The average period for which benefit was claimed, however, was 8 weeks as against 7 weeks and 1 day in 1926–27.

BULGARIA.—Direction Générale de la Statistique. *Annuaire statistique du Royaume de Bulgarie, 1927. Sofia, 1929. 532 pp.*

Includes data on production, wages, strikes, industrial accidents, prices, social insurance, and cooperative societies.

CANADA (ONTARIO).—Department of Labor. *Survey of industrial welfare in Ontario. Toronto, 1929. 39 pp., illus.*

A brief report of the sickness and accident work and general health activities, recreation, insurance features, and other branches of welfare work carried on by 300 firms in the Province of Ontario.

— (QUEBEC).—Department of the Secretary of the Province. Bureau of Statistics. *Statistical year book, 1928. Quebec, 1928. 459 pp.*

Included in the various sections of this volume are those on the following subjects: Immigration, colonization, production in various industries, labor unions, strikes, operations of employment bureaus, unemployment, and people's banks.

FRANCE.—Commission Supérieure de la Caisse Nationale des Retraites pour la Vieillesse. *Rapport sur les opérations et la situation de cette caisse, année 1927. Paris, 1929. 106 pp.*

The report of the national old-age retirement fund of France for the year 1927.

GERMANY (DRESDEN).—Statistisches Amt. *Die Verwaltung der Stadt Dresden, 1927. Dresden, 1929. 191 pp., illus.*

The volume contains information in regard to the economic and social conditions of the city of Dresden, including chapters on housing and welfare work.

— (LEIPZIG).—Statistisches Amt. *Statistisches Jahrbuch der Stadt Leipzig, 6. Band, 1919–1926. Leipzig, 1928. 116 pp.*

The publication includes statistics on the number of wage earners in various industries.

GREAT BRITAIN.—Colonial Office. *Report by the Right Honorable W. G. A. Ormsby Gore, Parliamentary Undersecretary of State for the Colonies, on his visit to Malaya, Ceylon, and Java during the year 1928. London, 1928. 166 pp.; maps. (Cmd. 3235.)*

Gives a general account of the countries visited, with discussion of industries followed, public health, education, and other topics of interest.

— Committee on Industry and Trade. *Final report. London, 1929. 338 pp. (Cmd. 3282.)*

Reviewed in the Labor Review for June, 1929 (p. 224).

— Department of Overseas Trade. *Report on economic conditions in France in 1928, by J. R. Cahill. London, 1928. 344 pp.*

In addition to an account of general financial and industrial conditions in France from 1926 to 1928, some information is given in regard to cost of living, employment, wages and hours of labor, and housing.

— Industrial Fatigue Research Board. *Report No. 54: An investigation into the sickness experience of printers (with special reference to the incidence of tuberculosis), by A. Bradford Hill. London, 1929. 108 pp.; charts.*

A study of the morbidity among different occupational groups in the printing trades directed especially toward the excessive incidence of tuberculosis.

— Ministry of Agriculture and Fisheries. *Report of proceedings under the agricultural wages (regulation) act, for the year ending September 30, 1928. London, 1929. 70 pp.*

Some data from this report are given in this issue.

— Ministry of Health. *National health insurance fund accounts. Appendix. Receipts and payments for the year ended December 31, 1926, of approved societies, insurance committees, and the special fund constituted under section 64 of the national health insurance act, 1924. London, 1929. 7 pp. (Cmd. 3315.)*

GREAT BRITAIN.—Ministry of Labour. *Procedure regulating the entry of foreigners for employment in Great Britain (aliens' order, 1920, Article I (3) (b).* London, 1929. 6 pp. (Cmd. 3318.)

Reviewed in this issue.

—Registry of Friendly Societies. *Report for the year 1927. Part 2: Friendly Societies.* London, 1929. 50 pp.

The statistics are for the year 1926. Both the membership and the funds of the societies increased during the year, the membership from 8,227,000 to 8,465,000 and funds from £91,000,000 to £97,000,000.

HUNGARY (BUDAPEST).—Kommunal-Statistisches Amt. *Statistisch-Administratives Jahrbuch der Haupt- und Residenzstadt Budapest, 1928.* Budapest, 1928. 472\*, 1027 pp.; map.

Includes comprehensive wage data for various industries in the city of Budapest.

PERU.—Department of Treasury and Commerce. Bureau of Statistics. *Statistical abstract of Peru, 1927.* Lima, 1928. 220 pp.; charts.

Includes statistics of prices and cost of living, production, industrial accidents, and wages and hours in sugar manufacture.

SOVIET UNION.—Central Social Insurance Administration. *Social insurance in the Soviet-Union.* Moscow, 1928. 71 pp.

Reviewed in this issue.

SPAIN.—Ministère du Travail, du Commerce et de l'Industrie. Direction Générale du Travail. Section des Habitations à Bon Marché. *Les habitations à bon marché en Espagne, por Federico López Valencia.* Madrid, 1928. 16 pp., illus. (In French, Spanish, and English.)

Reviewed in this issue.

### Unofficial

AMALGAMATED CLOTHING WORKERS OF AMERICA. Research Department. *Bibliography of source material, articles, and books on the Amalgamated Clothing Workers of America.* New York City, 11-15 Union Square, May, 1929. 36 pp.

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE. *The Annals, Vol. CXLIII, No. 232: Women in the modern world—the changing educational, political, economic, and social relationships of women in the United States.* Philadelphia, 3622 Locust Street, May, 1929. 396 pp.; map, charts.

The volume is divided into seven parts, under the following heads: The genesis and significance of the woman movement; Woman's contribution to the modern home; Women's work outside the home—in industry; Women in business and the professions; Some achievements of women as creative citizens; Social attitudes affecting women's work; The integration of women's activities.

American Management Association. *General management series, No. 85: Trends in personnel health service, by W. H. Lange.* New York, 20 Vesey Street, 1929. 48 pp. (Second interim report of committee on personnel administration.)

The health practices of a number of companies are described and there is a brief general account of the development of industrial health work.

—*General management series No. 87: Financial aspects of industrial pensions, by Bryce M. Stewart.* New York, 20 Vesey Street, 1928. 24 pp.

ANDERSON, V. V. *Psychiatry in industry.* New York, Harper & Bros., 1929. 364 pp.

A report on the experience, methods, and results of a four years' study of personnel problems by a well-organized group of psychologists, psychiatrists, and psychiatric social workers in one of the largest department stores in the United States.



BAUMGARTEN, PHIL. FRANZISKA. *Die Berufseignungsprüfungen, Theorie und Praxis.* Berlin, R. Oldenbourg, 1928. 742 pp.; diagrams, illus.

The volume deals with examination of persons for the purpose of vocational guidance. The material is divided into two parts, theoretical and practical, including chapters on examination of apprentices and workers for various industries and occupations.

BRUNNER, EDMUND DES. *Immigrant farmers and their children.* New York, Doubleday, Doran & Co. (Inc.), 1929. 277 pp.; charts.

A study made for the Institute of Social and Religious Research, in which a comparison is made of the size and value of farms operated by foreign-born and by native-born tenants and owners, and of the respective farming methods used. Other sections of the report deal with intelligence tests of immigrants' children, intermarriage, social life, the church in the immigrant community, and four individual rural settlements of immigrants.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE. *Histoire économique et sociale de la guerre mondiale: Déportation et travail forcé des ouvriers et de la population civile de la Belgique occupée (1916-1918), par Fernand Passelecq.* New Haven, Yale University Press, 1928. 491 pp.

A historical account of the deportation and forced labor of the Belgian workers and the civilian population by the Germans during the World War.

THE CITIZEN OF TO-MORROW. London, Ernest Benn (Ltd.), 1929. 153 pp.

Described as "the outcome, and in a certain sense the report, of the National Conference on the Welfare of Youth held October 25-29, 1929." Discusses the condition of young people from the standpoints of industry, education, religion, leisure, citizenship, and the like.

CLAY, HENRY. *The problem of industrial relations and other lectures.* London, Macmillan & Co. (Ltd.), 1929. 322 pp.

COMITÉ CENTRAL DES HOUILLÈRES DE FRANCE. *Rapport présenté à l'Assemblée Générale Ordinaire du 22 Mars 1929.* Paris, 35 Rue Saint-Dominique, 1929. 19 pp.

The annual report of the French coal operators' association, containing an account of the condition of the industry in 1928 and statistics of wages, production, and output per worker from 1900 to 1928.

CONFEDERAZIONE GENERALE FASCISTA DELL'INDUSTRIA ITALIANA. *Annuario, 1928-29.* Rome, 1929. 901 pp.

The yearbook of the Fascist General Industrial Confederation of Italy. It contains the records of the meeting of the national congress in June, 1928, also articles under the general title of "Problems of Labor," covering legislative and administrative matters, labor law, the labor charter, social insurance, guardianship of labor, hygiene, tuberculosis, labor education, hours of labor, international labor organization, unemployment, emigration, cost of living, labor inspection, and collective contracts.

EMMET, BORIS. *The California and Hawaiian Sugar Refining Corporation of San Francisco, California. A study of the origin, business policies, and management of a cooperative refining and distributing organization.* Stanford University, Graduate School of Business, 1928. 293 pp.; charts. (Stanford business series No. II.)

Certain parts of this volume bearing on labor problems are reviewed in this issue.

GEMMILL, PAUL F. *Present-day labor relations.* New York, John Wiley & Sons (Inc.), 1929. 312 pp.; charts.

A critical examination of employee representation, trade-unionism, and other forms of collective negotiations. Considerable space is devoted to the subject of union-management cooperation.

GOTTL-OTTLILIENFELD, FRIEDRICH. *Fordismus: Über Industrie und Technische Vernunft*. Jena, Gustav Fischer, 1926. 169 pp. 3d ed.

The volume deals with the Ford industrial methods and with the Taylor scientific management system and contains criticism of both.

HADER, JOHN J., and LINDEMAN, EDUARD C. *What do workers study?* New York, Workers' Education Bureau Press, 1929. 66 pp. (Workers' education research series, Monograph No. 2.)

HERKNER, HEINRICH. *Die Arbeiterfrage: Erster Band, Arbeiterfrage und Sozialreform; Zweiter Band, Soziale Theorien und Parteien*. Berlin und Leipzig, Walter de Gruyter & Co., 1922. 616 and 658 pp.

A historical review of the labor movement in Germany, especially during and after the war, in which the socialist movement is emphasized.

HUTCHINS, GRACE. *Labor and silk*. New York, International Publishers, 1929. 192 pp.; map, diagrams, illus.

This is one of a series of volumes, written from a labor point of view, dealing with labor conditions in various important American industries.

INTERNATIONAL ASSOCIATION FOR SOCIAL PROGRESS (BRITISH SECTION). *Report on family provision through social insurance and other services*. London, Cooperative Printing Society (Ltd.), 1928. 18 pp.

National family endowment is discussed as one of the possible provisions for "family needs." Estimates of the cost of allowances for children through compulsory contributory insurance are submitted.

INTERNATIONALES HANDWÖRTERBUCH DES GENOSSENSCHAFTSWESENS. Berlin, Struppe & Winckler, 1928. 988 pp., 2 vols.

This dictionary on cooperation is in German and contains biographies of the leaders and prominent workers in the various forms of cooperative movements, such as consumers', agricultural production, credit, and housing cooperation, and articles on the history and present conditions of cooperation in various countries, including workers' cooperation for various purposes.

IOWA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS. Agricultural Experiment Station. *Bulletin No. 237 (revised): Cost of Living on Iowa Farms*, by George H. Von Tungeln and others. Ames, Iowa, November, 1928. 62 pp.; chart.

KNIGHT, AUGUSTUS S., M. D., and DUBLIN, LOUIS I. *Mortality, morbidity, and working capacity of tuberculosis patients after discharge from the Metropolitan Life Insurance Co. Sanatorium between 1914 and 1927*. [New York], 1929. 13 pp. (Reprinted from the *Proceedings of the Association of Life Insurance Medical Directors of America*, Vol. XV, 1929.)

This report is largely a statistical study of the results of the care of 1,448 patients with pulmonary tuberculosis who were discharged from the sanatorium at Mount MacGregor maintained by the Metropolitan Life Insurance Co. for its employees. The report covers the mortality among the discharged patients, the morbidity rates, and the degree to which the working capacity of the patients was restored.

LEE, EDWIN A., Editor. *Objectives and problems of vocational education*. New York, McGraw-Hill Book Co. (Inc.), 1928. 451 pp.; chart.

A new scanning of the basic purposes of the Federal vocational education act of 1917 and an appraisal of the first decade of accomplishment under this law. Each of the 16 chapters was contributed by a different expert in the field of vocational education.

LIEK, E. *Les méfaits des assurances sociales en Allemagne et les moyens d'y remédier*. Paris, Payot, 1929. 219 pp.

A discussion of the faults of the German social insurance system from a medical standpoint and suggestions for their remedy.

METROPOLITAN LIFE INSURANCE CO. Policyholders Service Bureau. *Foreman training plans*. New York [1929?]. 52 pp.

MILAN. CLINICA DEL LAVORO. *Quaderno della Clinica del Lavoro della R. Università di Milano*. Milan, Antonio Cordani, 1929. 23 pp., illus.

An account of occupational diseases, with instructions on how to avoid them.

MONTREAL HEALTH SURVEY COMMITTEE. *Survey of public health activities, Montreal, Canada, October, 1928*. New York, Metropolitan Life Insurance Co. [1928?]. 149 pp.; map, charts.

Report of a general survey of the public health activities in Montreal and the recommendations of the committee making the survey.

NATIONAL HOUSING ASSOCIATION. *Housing problems in America. Proceedings of the Tenth National Conference on Housing, Philadelphia, January 28-30, 1929*. New York, 105 East Twenty-second Street, 1929. 355 pp.; diagrams.

Papers and discussions covering the more important aspects of housing, town planning, and regional development.

NATIONAL INDUSTRIAL CONFERENCE BOARD (INC.). *Employee thrift and investment plans*. New York, 247 Park Avenue, 1929. 114 pp., chart.

A description of thrift and investment plans as carried on by 319 companies, employing approximately one and one-third million wage earners.

— *A picture of world economic conditions at the beginning of 1929*. New York, 247 Park Avenue, 1929. 254 pp.

— *Public schools and the worker in New York. A survey of public educational opportunities for industrial workers in New York State*. New York, 247 Park Avenue, 1928. 80 pp.

Reviewed in this issue.

NATIONAL METAL TRADES ASSOCIATION. Committee on Industrial Relations. *Employee medical service*. Chicago, 122 South Michigan Avenue, 1929. 30 pp.

Reviewed in this issue.

OLIVIER, SYDNEY HALDANE. *White capital and colored labor*. London, Hogarth Press, 1929. 348 pp.

Lord Olivier entered the British Colonial Office in 1882, and has been connected with the colonial administration for a large part of his life, so that he is peculiarly well fitted to write of the results of the contacts between white and colored which the policy of white expansion produces. At the present time there is a sharp clash of opinion among the British themselves, especially in Africa, as to whether the colonial possessions should be regarded as a trust to be administered for the benefit of the natives, or as "undeveloped British estates," to be developed for the benefit of the Empire in general and of the white settlers in particular. Lord Olivier, who holds the first view, presents in this volume a study of the results of the different policies, since both have been tried in one or another of the colonial possessions and mandated territories, together with a discussion of the arguments, political, economic, and humane, offered by both sides.

PEAR, T. H. *Fitness for work*. London, University of London Press (Ltd.), 1928. 187 pp.

PITMAN'S DICTIONARY OF INDUSTRIAL ADMINISTRATION. *A comprehensive encyclopedia of the organization, administration, and management of modern industry, edited by John Lee, with special contributions by over 100 eminent authorities*. London and New York, Sir Isaac Pitman & Sons (Ltd.), 1928. 1151 pp. 2 vols.

PRINCETON UNIVERSITY. Industrial Relations Section. *Employee savings plans*. Princeton, 1929. 17 pp.; chart. (Mimeographed.)

The different types of savings plans are classified and described in this report and the firms are listed according to their classification. There is a bibliography.



PURSE, BEN. *The British blind—a revolution in thought and action.* London, Buck Bros. & Harding (Ltd.), 1928. 109 pp.

Stresses the importance of improving the condition of the blind who are otherwise physically fit by securing them permanent, remunerative, and congenial work. It is pointed out that subsidies for the blind workers should not be regarded as satisfactory, but that interest should be taken "in the remodeling of all available machinery" so that these handicapped people may be able to obtain a higher economic reward for their labor.

RÉAL, CLAUDE, AND GRATEROLLE, P. *L'Industrie hôtelière.* Paris, Gaston Doin et Cie., 1929. 396 pp.

This description of the hotel industry contains a historical account of the industry, beginning with the hotels of antiquity and reviewing present-day developments, together with a description of occupations in large and small establishments.

SIMON, E. D. *How to abolish the slums.* London, Longmans, Green & Co. (Ltd.) 1929. 146 pp.; plans, illus.

Some discussion of this book is given in this issue.

WEIGERT, OSCAR, Editor. *Gesetz über Arbeitsvermittlung und Arbeitslosenversicherung, vom 16 Juli 1927.* Berlin, Reimar Hobbing, 1927. 539 pp. (Bücherei des Arbeitsrechts, Neue Folge, Band 6.)

Contains the law of July 16, 1927, relating to employment service and unemployment insurance, with comments thereon by Dr. Fritz Berndt, Margarete Ehlert, and others.

— *Neue Vorschriften über Arbeitsvermittlung und Arbeitslosenversicherung.* Berlin, Reimar Hobbing, 1928. 222 pp. (Bücherei des Arbeitsrechts, Neue Folge, Band 6b.)

Contains new decrees relating to employment service and unemployment insurance in Germany.

WISCONSIN UNIVERSITY. University Extension Division. Municipal Information Bureau. *Personnel, salary, and working conditions in police departments, cities of over 30,000 population in the United States, by Lorna L. Lewis.* [Madison?], 1928. 84 pp., mimeographed.

